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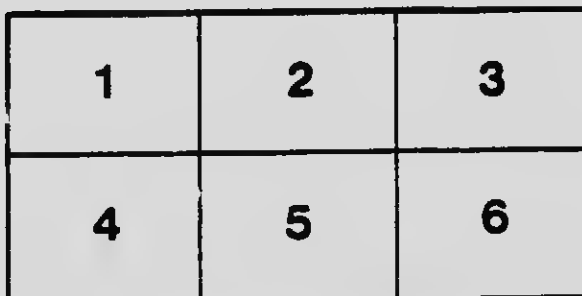
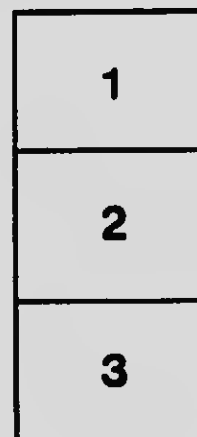
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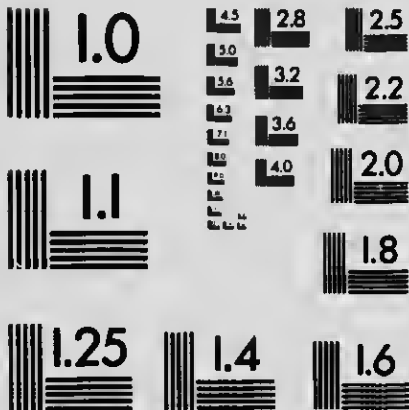
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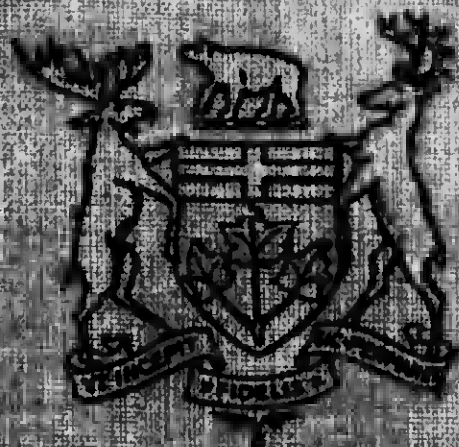


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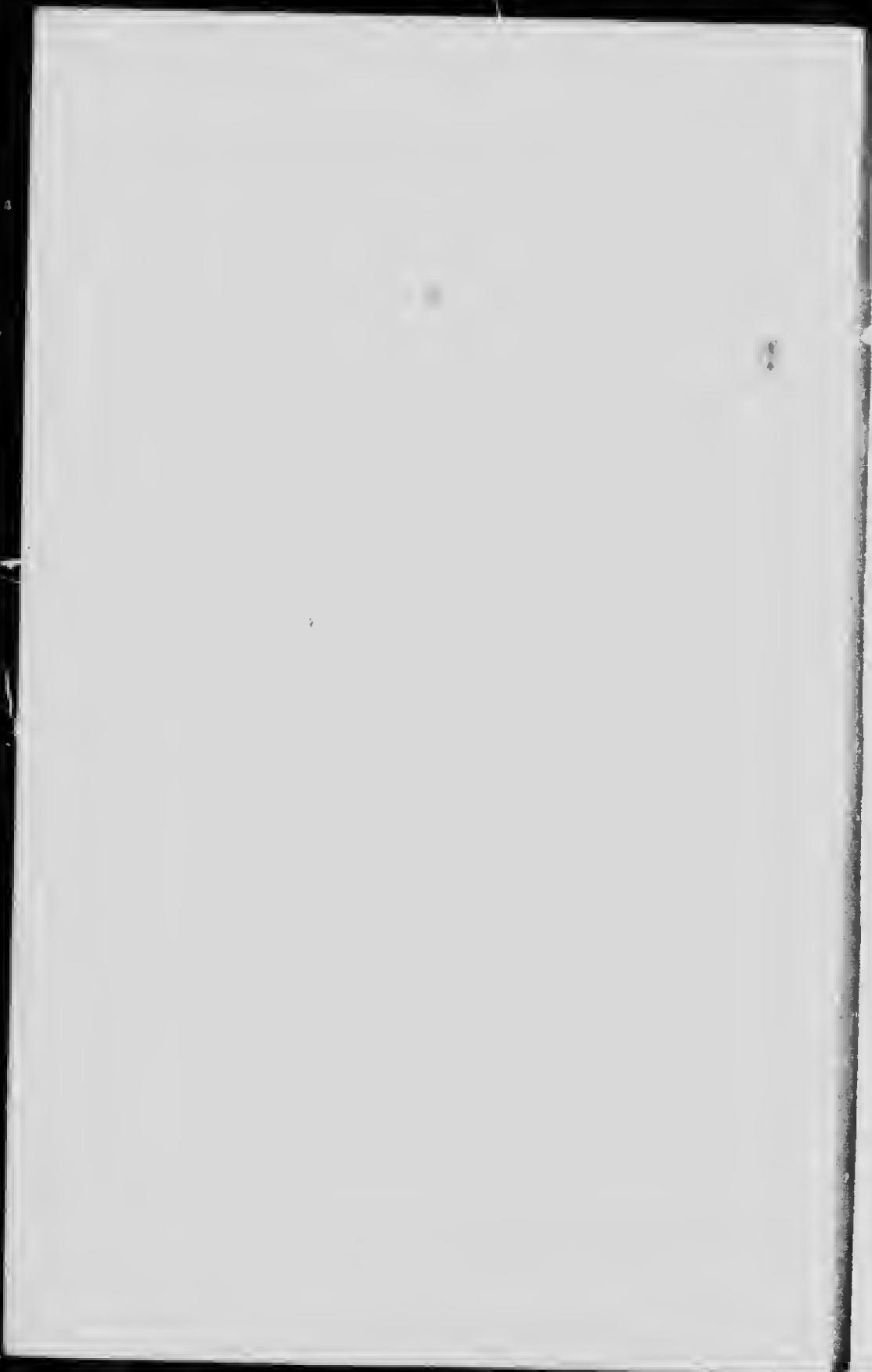


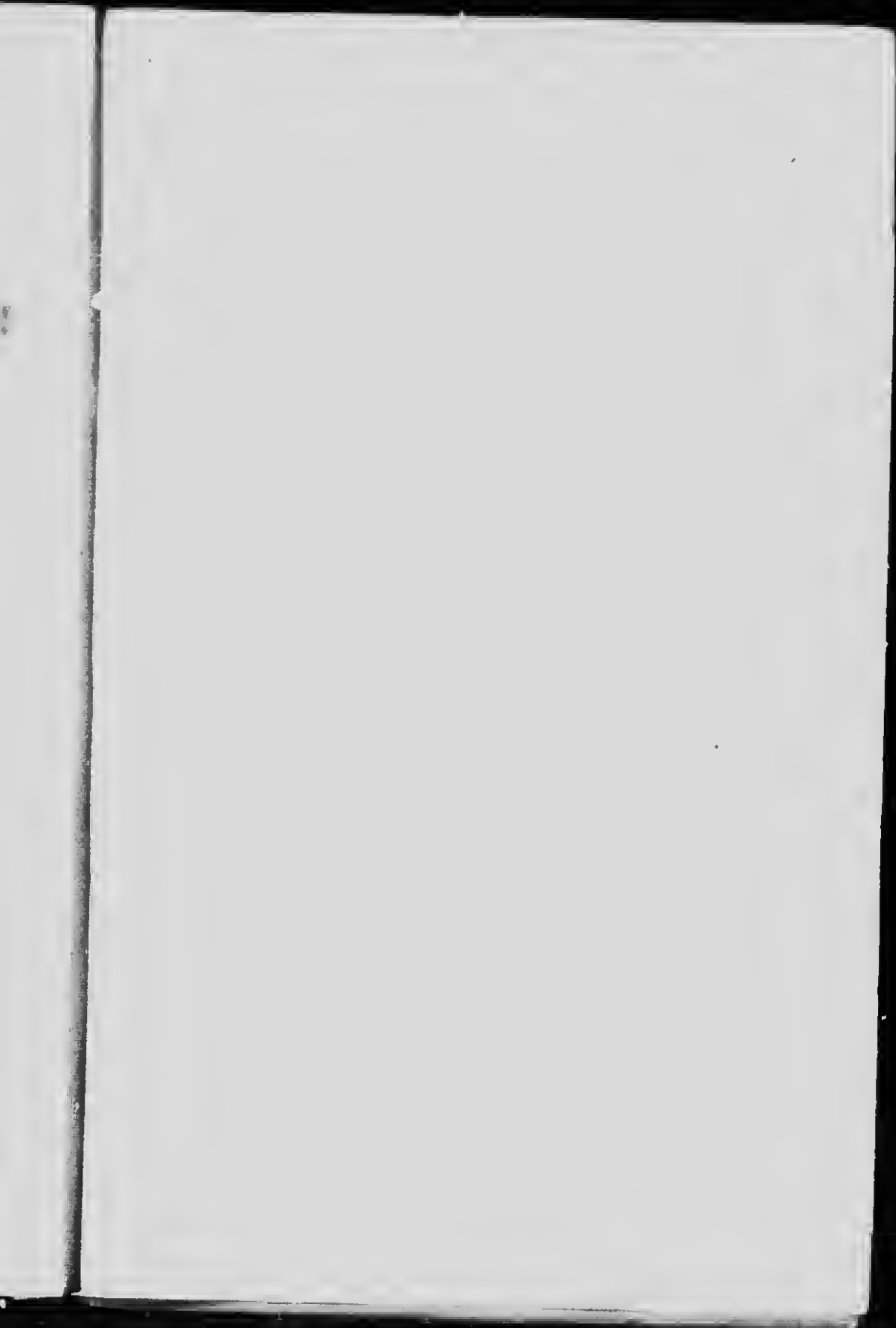
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BEYOND MAN'S FOOTSTEPS.

(From the picture by Weston Price, R.A., in the National Gallery of British Art.)

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“TO see ourselves as others see us” is not easy. To see our home-planet, the earth, as it is seen from other planets, is impossible. There is a pleasure sometimes, however, in imagining things that are really impossible, and we like to read books in which a clever writer pictures the doing of impossible things. A well-known book of this kind describes how two men made a journey from the earth to the moon. This journey, we are told, was made in a hollow globe covered with shutters, which could shut out the power of gravitation, just as wooden shutters shut out light. When these shutters were closed, the sphere and all that was in it had no longer any weight. It ceased to be attracted by the earth. As a result it gradually rose from the ground, being thrown off by the spin of the earth’s rotation, just as a drop of water is flicked off a mop or a revolving wheel. To return to the earth it was only necessary to open a shutter and admit enough of the power of gravitation to pull the globe down again.

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Let us now suppose ourselves in a sphere of this kind one fine summer day, ready to start on a trip to the sky in order to get a view of our world from a distance. We will not go so far as the moon, however, as we should then be too far from the earth to see it well; we will stop at about

half that distance. We shall find nothing there to hold on by and keep ourselves steady. We must, therefore, open our wonderful shutters on opposite sides of the sphere in such a way that the downward pull of the earth will be exactly balanced by the upward pull of the sun. Having come to rest, then, in this novel position, we look down on our old home, and see it as we have never seen it before.

Can that really be our dull solid earth? How bright and dazzling it is when seen against the black depths of star-gemmed space! It looks like the full moon at its brightest, but much larger. Its surface shines like burnished silver. Across the centre, from east to west, shows a clear white band, on either side of which gleams a bluish tint, shading off here and there into green, and towards the upper or north side there are traces of a warm yellow. But the greater part of the disc is white, with streaks and patches of pale blue and green. The tinted markings, we soon see, are not quite fixed: the colours vary, and sometimes vanish, shading off into pure white. It seems a globe of shimmering pearl!

Whence comes all this whiteness? We had expected to see dark blue oceans, green continents, yellow sandy deserts, and the white snow and ice at either pole. We had forgotten the clouds! Clouds as we know them are dull, gray, gloomy things, but that is because they come between us and the sun. Where the sunshine strikes full upon them they are as white as snow. We know the old proverb, "Every cloud has a silver lining." Up here in the serene depths of space we see only the silver lining of those earth-born clouds. We are literally looking on the bright side of things. We have the same view of the earth as the sun itself has, and from the sun's point of view there is no darkness, no twilight, no shadow.

Perhaps we have not realized how thick a veil of clouds surrounds our earth. Taking one season with another, it is only a small part of the earth that enjoys clear skies, and that part is mostly desert: life on our earth depends on the kindly mingling of cloud with sunshine. If we ask what

parts of the earth have cloudy skies for one half or more of their daylight hours, we shall find that these are the most fertile and most thickly inhabited countries. The places which have fewest clouds—happy lands, as we might think them—are for the most part dry deserts. No wonder, then, that the general colour of the earth as we see it from our sphere is a clear silvery white.

But we must have a definite picture of this planet of ours to take back with us and show our friends. So we get our camera ready, and since it is only a kind of moonlight that is coming to us from the earth, we must give our plate a long exposure. Just to make sure of having a good picture, we develop the first plate while we expose a second.

In due time the picture appears; but surely there is something wrong with the plate! The edge of the earth's disc is quite sharp and distinct, but all the markings which were so clear to the eye have come out as mere blurred streaks on the photograph. When our second plate is developed, we find precisely the same kind of streaky marks as before! The cause of this blurring soon becomes evident—the earth has not kept still during the time we had our plate exposed. If we watch the earth itself for a while, we see that it is still moving. All the patches of colour are farther to the right than they were a little while ago.

We set ourselves to watch the markings on the earth's disc, and soon we find that any prominent patch of colour which we select travels from one side of the circle to the other in twelve hours. That is just what we might have expected. The earth is, of course, spinning round continually, making a complete turn every twenty-four hours. Whenever any part of it comes round to the side next us, on which the sun is shining, that part passes through the sunrise line into full day. It swings round towards the other side of the shining disc, and passes through the sunset line back into twilight and night.

As we examine our blurred photographs, we notice that the streaks made by the moving patches do not lie straight

across the disc. They are all curved in a peculiar way. Moreover, we see that there is a part of the disc which has been visible to us all the time. The fact is that what we may call the upper end of the axis of the spinning globe is leaning towards us instead of standing straight up. So there is a small part of the earth on which the sun is shining day and night,



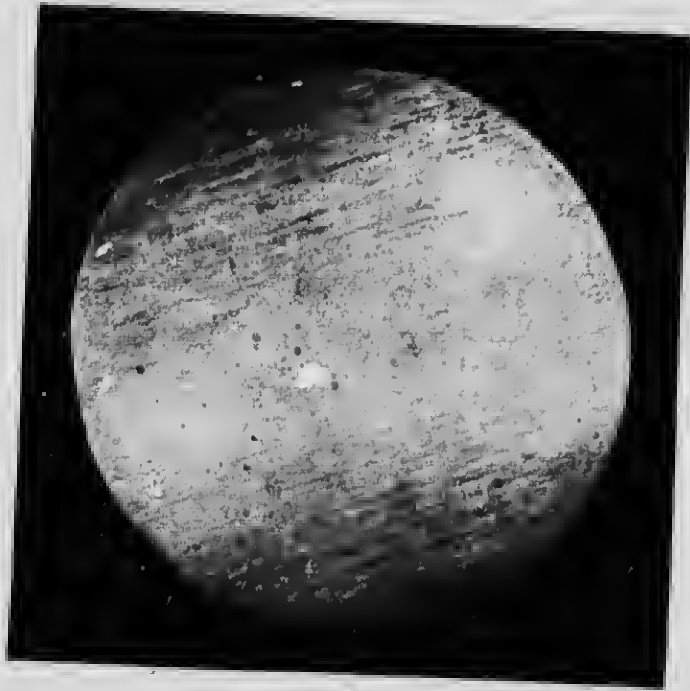
SUMMER.

while the whole upper or northern half of it has a rather longer time in the sunlight than the lower half. This seems rather unfair to the southern half of the earth.

As we continue our observations, we make a new discovery. The stars near the earth seem to be changing their places. A bright star near its left-hand edge draws nearer and nearer and finally disappears behind it. By-and-by it emerges at the right-hand side of the shining disc. All the other stars seem to be moving in the same direction, so we see that the earth is really changing its place among the stars. We knew,

of course, that the earth moves round the sun, but we never before realized what this motion was like.

This journey of the earth round the sun, we know, occupies a whole year, but we cannot stay up here so long to watch the changes that the year brings. It will be much better to return to earth now, and arrange for another excursion into



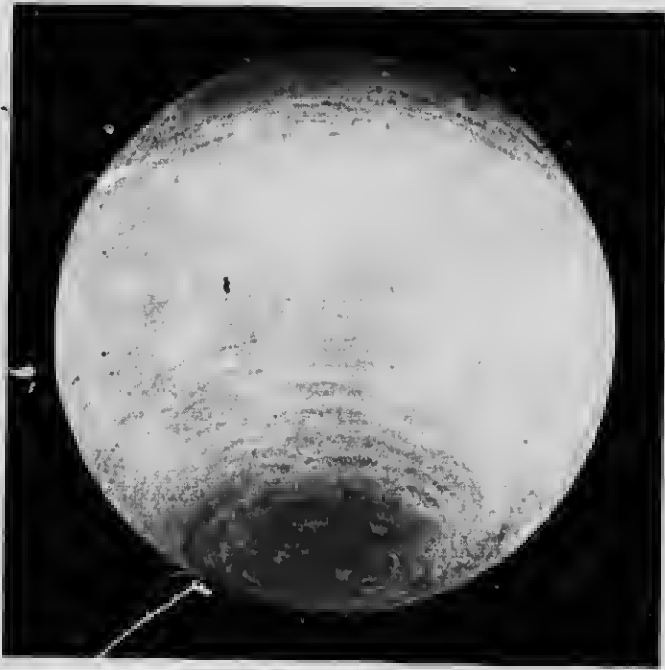
AUTUMN.

space about three months later, to see how our planet looks in mid-autumn.

Again we make that weird journey through empty space, and bring our sphere to rest, poised between earth and sun. Again we turn the keen eye of the camera towards the shining orb, and once more the streaks left upon our plate by the moving patches of light and shade trace out for us the direction of the earth's rotation. These streaks, we notice, dip down from the right towards the left, but instead of being curved they are now straight lines. The axis of rotation is therefore

sloping towards our left. Neither end of the axis—neither pole, as we say—has now any advantage over the other as regards its share of sunlight. Both poles are exactly on the edge of the disc, or on the line of sunrise and sunset, and every part of the earth's surface is in sunshine for exactly twelve hours.

On our former visit to empty space the north pole of the



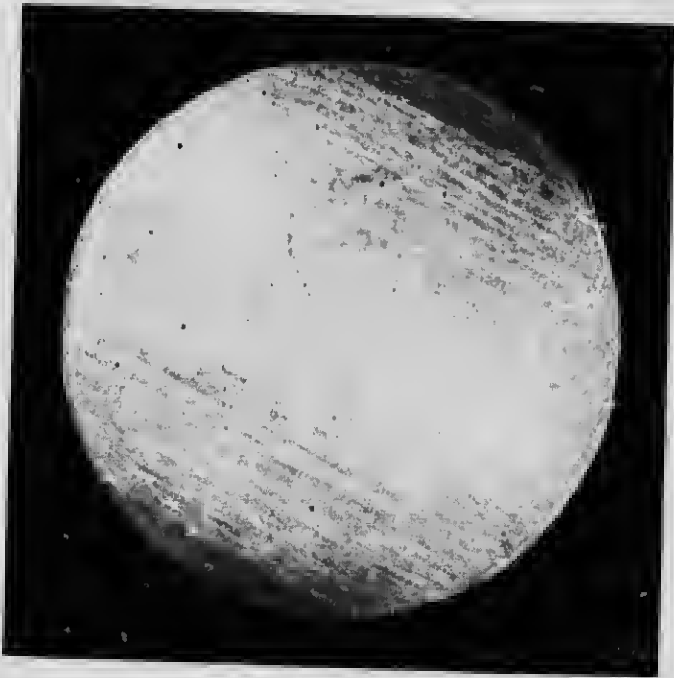
WINTER.

earth's axis was leaning towards us; now, as we see, it is leaning towards our right. But it has not changed its direction: it is we who have changed our point of view, in order that we may still have the sun at our back when we look earthwards. The axis is still pointing to the same part of infinite space,—that part where we see the pole star.

When autumn is past and mid-winter is come, let us once more charter our magic sphere for a voyage of observation, and record by the camera what we see. The tell-tale streaks

on the photograph show that the north pole is now turned away from us, while the region near the south pole enjoys perpetual day. This is therefore the summer season of the southern hemisphere, while the far north is buried in the darkness of its polar night.

Spring returns, and we make our final excursion into space. All that we see reminds us of what we noticed in autumn:



SPRING.

the only difference is that now the north pole is inclined towards our right hand instead of our left. This is just what we should expect, for both the earth and our magic sphere are now at the opposite side of the sun from where they were in autumn.

Now let us sum up briefly what we have learned from our imaginary survey of the earth, looking on it as outsiders, so to speak, and seeing it as observers on the other planets may be supposed to see it. In its general appearance it

reminds us of the moon, its greater size being due partly to our nearness, and partly to its being really larger. We were unable to trace the outlines of the seas and continents, as we had expected. The atmosphere, which surrounds it like a shell, contains a large quantity of water vapour, and this vapour, in the form of clouds, veils the greater part of the earth's surface. The moon does not seem to have any atmosphere around it, and thus there are no clouds to hide from us its hills and valleys.

What we have been able to see, therefore, is not so much the *surface* of the earth as its *movements*. We saw it spinning round like a top, every part of its surface coming into the light of day on one side and passing back into twilight and darkness on the other. When we are standing on the solid earth it is very hard indeed to realize that we are being whirled round in this way. We are more apt to think that the earth is fixed in one position, and that the sun and the stars and all that we call the sky are moving round about us.

From our distant position we were able to see the earth moving in another way. By watching the stars which sparkled near it in the sky we could see that it was travelling past them in a wide circle round the sun. And then, owing to the constant slope of the earth's axis, we saw that during our summer time the north pole is turned towards the sun, while six months later the south pole is turned towards it.

All this we have seen from our imaginary sphere, suspended between sun and earth. If we wish to learn about the surface of the earth and the peoples who live on it, we must occupy a more lowly position. We must act as real dwellers on the earth, and not as mere visitors. We must be content to see the dark side of the clouds as well as their silver lining. We shall thus gain a better knowledge of the earth as the home of men, and of men themselves as our kinsfolk and friends.

Land and Water

THE best way to learn what the world is like is to study the school globe. There are no clouds round it to hinder our view, and we see clearly the position of the water and land areas. Before we take any more imaginary journeys, then, it will be useful for us to learn from the globe a few facts about the earth as a whole.

The first thing that strikes us is that the greater part of the earth's surface is covered with water. It would not be very difficult to measure in a rough way how much of the area of our school globe represents land and how much is sea. We should first cut a number of patches or gores of a transparent tracing paper ruled in squares, sufficient to cover the whole globe. We should then place each of these gores over the part of the globe which it was meant to cover, and shade with pencil or chalk the parts where we see land through the paper, leaving the sea white. We then count the number of squares that are shaded and the number left unshaded on the various pieces of tracing paper, adding as many as we think necessary for the squares which are partly land and partly water. We should find that there are about three times as many unshaded squares, representing water, as there are shaded squares, representing land. Those who have measured carefully the area of land and of water respectively tell us that three fourths of the earth's surface is covered by oceans and seas, and only one fourth by land.

If we turn the globe so that the southern part of the Pacific Ocean is near the centre of what we see, we shall find that the hemisphere we are looking at is almost wholly covered with water. Australia and part of America are the only large pieces of land which we see. If we then move round to the opposite side, so that the British Isles are in the centre of our visible hemisphere, we have before us the greatest amount of land which we can see at a time on the

globe. But even on this land-hemisphere, as it is called, there is nearly as much water as land.

Look, now, at the way in which land and water are arranged. If we were to put on the globe a tiny insect to represent a ship, which could crawl over the smooth surface of the water, but could not cross the coast-line of any part of the land, this insect would be able to reach every part of the ocean surface quite freely. All the sea-water of the globe is joined together, and forms really one ocean. The land surface is differently arranged. It forms a number of islands, separated from one another by parts of the sea. Some of these land masses are very large indeed,—so large that we do not call them islands but *continents*, or continuous stretches of land. But however large such a mass may be, even though it consists of more than one continent, yet it has all round it a coast line where it is bounded by the ocean.

If we look a little below the surface, however, all this seems changed. The land or solid part of the earth is really continuous all round it, although it dips down in certain places to a low level and is covered by the water. If we were tall enough we could wade across the ocean as we wade across a creek or a pond, and feel solid ground under our feet all the way. The bed of the ocean consists of plains and valleys and hills, just as the dry land does. Its highest hills have their peaks and ridges above water, and we call them islands.

Although the whole of the water surface of the globe is joined together, we speak of different stretches of it as *oceans*. The area round the north pole is called the Arctic Ocean, and that round the south pole the Antarctic Ocean. These oceans are mostly covered with ice and snow, and we know very little about them. They may contain islands which have not yet been discovered, and we know that in the centre of the Antarctic there is a great mass of snow-clad land which we might call a continent.

The largest of the oceans is the Pacific. There is no real division between it and the Antarctic Ocean. If your school globe has the parallels of latitude marked, you may look for

the line of 40° south of the equator ; this line is taken by some as the boundary between the Pacific Ocean and what they call the Southern Ocean, which includes the Antarctic, while others take the Antarctic Circle as the limit.

The eastern shore of the Pacific is formed by America,—North, Central, and South,—and its western shore by Asia and Australia. Bering Strait, between Asia and North America, joins the Pacific with the Arctic Ocean.

Turn the globe a little towards the right, and you will see another large stretch of sea extending northwards from the Antarctic, and meeting the shores of Africa, India and other parts of Asia, and Australia. This expanse is named the Indian Ocean.

Another turn to the right shows us an ocean whose name is more familiar to us—the Atlantic. It joins freely to the Antarctic on the south and the Arctic on the north, with only an imaginary line of division between. It is much longer than the Indian Ocean, but narrower than either that or the Pacific.

The Sea-shore

CANADIAN boys do not know so much of the sea-shore as their cousins in the old country. Great Britain is made up of islands, where no place is more than two hours' journey from the sea-shore, and that is the great holiday ground of young and old. Canada, on the other hand, is half a continent in itself. It has a fine sea-coast on the east and on the west, to say nothing of the frozen Arctic Ocean or the lonely Hudson Bay on the north ; but to reach the coast on either side requires a journey of three days from the centre of the Dominion. Even the Ontario boy must take a long journey before he can spend a holiday on the sea-shore.

Let us suppose that we have made this journey instead of going to our summer camp in the woods. We shall find the sea-shore a pleasant place, and full of new interest. As soon

as we plunge into the water for our first morning's swim, we notice that this is not the kind of water we have been accustomed to in our lakes or rivers. We find it a little easier to float in, and that is an advantage; but the first mouthful of it which we chance to swallow makes us splutter and gasp as we have never done before. The water looks pure and clean, but its taste is horrible.

Sea-water is salt water. The boys of the sea-side village where we are staying are well aware of this, and would laugh at the wry face we make over the bitter salt taste. We, who have known only the fresh water of the great lakes or of the woodland streams, are much surprised at the amount of salt which the sea contains. Let us see if we can find out how much salt there is in its water.

Evaporation is the simplest way. By heating the water we can drive it off in vapour or steam, while the salt that is dissolved in it will be left in a solid form. Suppose, then, that we take a tall glass jar or cylinder, and fill it with sea-water to the depth of twelve inches. We shall place this over a fire, standing it in a pan of water to prevent the glass from cracking with the heat. If we keep the water in the pan boiling, by-and-by the water in the cylinder will grow less and less, until at last it is quite gone. If we then examine what is left, we shall find a thick crust or cake of solid matter, mostly salt, and this crust will be very nearly half an inch thick. That is to say, one twenty-fifth part, or four per cent., of the bulk of the sea is made up of salt dissolved in its water.

Where has all this salt come from? The most of it has doubtless come from the land. There is salt mixed with the soil everywhere. Some of it is used by plants as food, and when these plants are dried and burnt, their ashes contain a little salt. Our bodies contain salt: we taste it in the tears we shed, and in the blood which flows from a cut finger. Rain water is pure, but as it flows through the soil it becomes mixed with a little salt and other substances, and these are carried down by streams and rivers to the sea.

All the salt which thus reaches the sea must remain in it.



CAUGHT BY THE TIDE.

(From the picture by J. C. Hoock, R.A. By permission of the Corporation of London.)

Great quantities of water rise from the ocean every day in vapour, but the salt is left behind. This vapour is turned into rain, and when it falls on the dry land it brings back to the sea once more a small tribute of salt. We can imagine, then, that long ages ago the water of the sea contained less salt than it does to-day, and that its saltness is still slowly increasing.

Lakes which have no outlet become salt in the same way. The Great Salt Lake in the United States is so named from



LOW TIDE.

the saltness of its waters. The Dead Sea in Palestine receives the waters of the swift-flowing Jordan, but has no outlet, the evaporation caused by the hot sun being sufficient to carry off all its surplus water. This lake is about seven times as salt as the sea.

The sea-shore has another surprise for us when we visit it for the first time. At some times of the day there seems to be more water in the sea than at other times. On the lake shore we can tie our boat to a post at the side of the jetty, and when we come back we find it floating in the same

(1,580)

place. There is, of course, a difference between the summer and the winter level of the water, or between a dry season and a rainy one, but that is all.

Not so with the sea-shore. We may leave our boat on the beach just clear of the water in the morning, and when we come back to it in the afternoon we may find that there is half a mile of sandy beach between us and the water. Twice a day the sea rises to its highest level, and then gradually



HIGH TIDE.

sinks again to its lowest. Nor does the hour of high and of low water remain the same; each day it is nearly an hour later than it was the day before.

This regular rise and fall of the water on the sea-shore is known as the tides, and there is a good deal about the behaviour of the tides which it is not easy to understand. Robert Louis Stevenson, in one of his charming stories of adventure, tells of a boy who found himself alone on a small island on the coast of Scotland. He was almost starved by hunger and cold, and people who passed by in a boat would not stop to

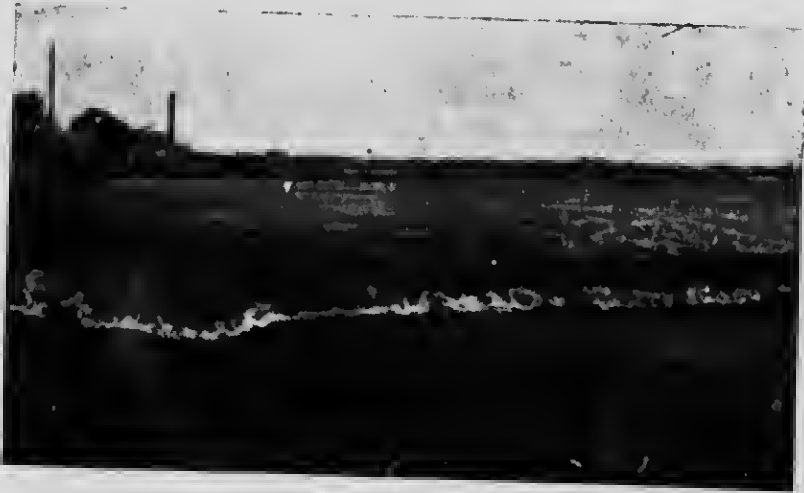
rescue him and put him ashore on the mainland. When next the boat passed, a man in it shouted to him something about the tide. Then at last he discovered that the island on which he thought himself imprisoned was only an island at high water; for several hours each day it was joined to the shore by a strip of low beach. He had not thought of the tides: his island had been a real island when he first walked round it, and in his ignorance he supposed that he could never leave it except by means of a boat.

The tides are a series of long low waves, due mainly to the attraction of the moon, which follow one another at an interval of about twelve hours, and sweep round the world from east to west. But it is only in the wide expanse of the Southern Ocean that these waves are free to follow this course. The coasts of the continents check their movement, and turn them aside into bays and gulfs. In such places they rise to a great height, and flow far up on the shore, filling the mouths and estuaries of rivers and changing for a time the direction of their flow. While the difference between high tide and low tide in the Pacific Ocean is only two or three feet, at the head of wide bays and estuaries it may be twenty, forty, or even sixty feet.

On the Atlantic shores of Canada we see this wonderful effect of the tides better than anywhere else. Every one has heard of the high tides of the Bay of Fundy. "In the narrower parts," says a Canadian writer, "the water runs at the rate of six or seven miles an hour, and the vertical rise of the tide amounts to sixty feet or more. At some points these tides, to an unaccustomed spectator, have rather the aspect of some rare convulsion of nature than of an ordinary daily occurrence.

"At low tide, wide flats of brown mud are seen to extend for miles, as if the sea had altogether retired from its bed, and the distant channel appears as a mere strip of muddy water. At the commencement of flood, a slight ripple is seen to break over the edge of the flats. It rushes swiftly forward, and covering the lower flats almost instantaneously, gains rapidly on the higher swells of mud, which appear as if they were being dissolved in the turbid waters.

“At the same time the torrent of red water enters all the channels, creeks, and estuaries, surging, whirling, foaming, and often having in its front a white, breaking wave or ‘bore,’ which runs steadily forward, meeting and swallowing up the remains of the ebb still trickling down the channels. The mud flats are soon covered; and then, as the stranger sees the water gaining with noiseless and steady rapidity on the steep sides of banks and cliffs, a sense of insecurity comes over him, as if no limit could be set to the advancing deluge. In a little time, however, he sees that the command, ‘Hitherto



TIDAL BORE, BAY OF FUNDY.

shalt thou come, but no further,’ has been issued to the great Bay tide: its retreat commences, and the waters rush back as rapidly as they entered.”

On the shores of the Pacific Ocean there are river mouths where the incoming tide causes a disturbance of the same kind, as we learn from the following vivid description of the tidal bore of the Tsien-Tang, a river in China:—

“As the hour of flood-tide approached, crowds gathered in the streets running at right angles to the Tsien-Tang, but at safe distances. My position was a terrace in front of the Tri-wave temple, which afforded a good view of the entire scene.

"On a sudden all traffic in the throng and mart was suspended; porters cleared the front street of every description of merchandise, boatmen ceased lading and unlading their vessels, and put out into the middle of the stream. The centre of the river teemed with craft, from small boats to large barges, including the gay 'flower-boats.'

"Loud shouting from the fleet announced the appearance of the flood, which seemed like a glistening white cable stretched athwart the river at its mouth, as far down as the eye could reach. Its noise, compared by Chinese poets to that of thunder, speedily drowned that of the boatmen; and as it advanced with great rapidity—at the rate, I should judge, of twenty-five miles an hour—it assumed the appearance of an alabaster wall, or rather a cataract four or five miles across and about thirty feet high, moving homely onward!

"Knowing that the bore of the Hoogly—which scarcely deserves mention in comparison with the one before me—invariably overturned boats which were not skilfully managed, I could not but feel apprehensive for the lives of the floating multitude. As the foaming wall of water dashed furiously onward, they were silenced, all being intently occupied in keeping their prows towards the wave, which threatened to submerge everything afloat; but they all vaulted, as it were, to the summit in perfect safety.

"The spectacle was of greatest interest when the bore had passed about half way among the craft. On one side they were quietly reposing on the surface of the unruffled stream, while those on the lower portion were pitching and heaving on the flood; others were scaling, with the agility of salmon, the formidable cascade.

"A very short period elapsed between the passage of the bore and the resumption of traffic. The vessels were soon attached to the shore again, and women and children were occupied in gathering articles which the careless or unskilful had lost in the confusion. The streets were drenched with spray, and a considerable volume of water splashed over the banks into the head of the Grand Canal, a few feet distant."

If such scenes as these were to occur twice every day, and at a different hour each day, it would be a serious hindrance to trade as well as a danger. But when we study the tides we find that the amount of their rise and fall is not the same from day to day. Twice a month, at new moon and full moon, the difference is greater than at other times, and only in spring and in autumn do the tides reach their greatest height.

At St. John, New Brunswick, the ebb and flow of the tide has a curious effect. There the waters of the St. John River, with all its wealth of trihutary streams and spreading lakes, must enter the sea through a narrow rocky gorge. When the tide is low, the river forms at this place a rapid or fall whose height depends on the lowness of the tide. As the flood tide sets in and the level of the sea water rises, this waterfall gradually loses its force until the salt water below the gorge and the fresh water above are at the same level. But the tide rises still higher, and now a current sets in from the sea to the river, which runs ever faster as the sea level rises; finally it forms a rapid or a fall running from the sea to the land.

A moderate rise and fall of the tide is of great use to shipping. At high tide vessels may enter river mouths and harbours which would otherwise be barred to them, especially during the dry season. In all rivers the part which is affected by the tide is of more value to commerce than the part which lies above it, and we often find that an important town has arisen on the banks of a river just at the place where the farthest influence of the tide is felt.

The Atlantic Ferry

“**W**HITHER go the clouds and wind so eagerly? In what wild regions do the elements hold council, or where unbend in terrible disport?”

“Here! Free from that cramped prison called the earth, and out upon the waste of waters. Here, warring, raging,

shrieking, howling, all night long. Hither come the sounding voices from the caverns on the coast, and hither to meet them rush the blasts from unknown desert places of the world. Here, in the fury of their unchecked liberty, they storm and buffet with each other until the sea leaps up in ravings mightier than theirs, and the whole scene is madness.

“On, on, on, over the countless miles of angry space, roll the long heaving billows. Mountains and caves are here, and yet are not, for what is now the one is now the other; then all is but a boiling heap of rushing water. Pursuit and flight and mad return of wave on wave, and savage struggle ending in a spouting up of foam that whitens the black night; incessant change of place, and form, and hue; constancy in nothing but eternal strife; on, on, on they roll, and darker grows the night, and louder howl the winds, and more clamorous and fierce become the million voices of the sea, when the wild cry goes forth upon the storm—‘A Ship!’”

“Onward she comes, in gallant combat with the elements, her tall masts trembling, and her timbers starting on the strain; onward she comes, now high upon the curling billows, now low down in the hollows of the sea, as if hiding for the moment from its fury; and every storm-voice in the air and the water cries more loudly yet—‘A Ship!’”

“Still she comes onward bravely, and though the eager multitude of waves crowd thick and fast upon her all the night, and dawn of day discovers the untiring train yet bearing down upon the ship in an eternity of troubled water, onward she comes, with dim lights burning in her hull, and people there, asleep, as if no deadly element were peering in at every seam and chink, and no drowned seaman’s grave, with but a plank to cover it, were yawning in the unfathomable depths below.”

Thus Dickens pictures for us a stormy night on the Atlantic, such, no doubt, as he himself had seen when crossing from Liverpool to Halifax about seventy years ago. Steamships were then a novelty, and the first steam liner, the *Britannia*, had only recently begun her voyages between England and the

United States. On no part of the ocean is there so much traffic as on the North Atlantic, the great "ferry" between the Old World and the New, and even before the coming of steamships many passengers dared the stormy crossing in order to make a home in the New World or to revisit friends in the Old.

The width of the Atlantic averages about 3,000 miles, a long voyage in the days of which we speak. The *Mayflower*, with the first shipload of English immigrants on board, took more than three months—106 days, to be exact—on her passage. This was longer even than the voyage of Columbus,



THE "BRITANNIA" (1840) AND A MODERN LINER.

who made his crossing within ten weeks. In the best days of sailing-ships three weeks was reckoned a quick passage, and double that time was not uncommon.

The introduction of steam-power soon made the Atlantic crossing a less formidable undertaking for passengers. In 1840 the *Britannia* crossed from Liverpool to Boston in fifteen days; sixty years later the time taken by the "greyhounds of the Atlantic" was only a little over five days. As the time has been reduced, the comforts of passengers have been better cared for in other ways. The size of the ship is the most important point for comfort in travel, and the steamships which are used on the Atlantic are by far the largest in the

world. You can hardly imagine a ship 900 feet or 300 yards long, yet this enormous size has now been reached. Three turns round the deck of such a ship is a walk of more than a mile. The Atlantic liners are often described as floating hotels, and indeed there are few hotels where one can live as comfortably.

A day on the Atlantic ferry as things now are is a complete contrast to what is described by Dickens, in the depressing pictures of emigrant life which he gives us in his novel *Martin Chuzzlewit*.

At eight o'clock our steward knocks and informs us that our bath is ready. A refreshing bath is followed by an abundant breakfast, and then we are ready for what amusement the day may bring. Deck games of various sorts are going on all the time. If we are studious, we may seek the library and spend our time with magazines or books. In the evening there may be a concert in the saloon, or indoor games, or reading. And always there are the roomy promenade decks, where we may walk or even run whenever we will, and the comfortable deck chairs where, wrapped up in a rug, we may prefer to drowse the pleasant hours away. The chief events of our day are the meal-hours; and time passes so smoothly that we soon forget what day of the week it is. The end of the voyage comes almost like an unpleasant interruption to a holiday.

To this degree has the progress of invention in shipping tamed the rough Atlantic for those who cross it on business or on pleasure. But those who live by it, the sailors on board our cargo steamers and coasting craft, and the fishermen in their small schooners or still smaller boats, still find the Atlantic very like what it used to be. Improvements in comfort and safety have come into their life, no doubt, but there is little room in it for luxury and none for idleness.

"A River in the Ocean"

THERE is a river in the ocean. In the severest droughts it never fails, and in the mightiest floods it never overflows. Its banks and its bottom are of cold water, while its current is of warm. The Gulf of Mexico is its fountain, and its mouth is in the Arctic Seas. It is the Gulf Stream. There is in the world no other such majestic flow of waters. Its current is more rapid than the Mississippi or the Amazon, and its volume more than a thousand times greater.

"Its waters, as far out from the gulf as the Carolina coasts, are of an indigo blue. They are so distinctly marked that their line of junction with the common sea water may be traced by the eye. Often one half of the vessel may be perceived floating in the Gulf Stream, while the other half is in common water of the sea; so sharp is the line and such the want of affinity between those waters, and such, too, the reluctance, so to speak, on the part of those of the Gulf Stream to mingle with the common water of the sea."

With these words an American writer half a century ago began his famous study of the winds and currents of the Atlantic Ocean, of which the Gulf Stream is the most interesting feature. Whence comes this vast ocean river? To what causes are its movements due? We know that it issues from the Gulf of Mexico through the Strait of Florida and flows northwards parallel to the coast as far as Cape Hatteras, where it bends eastwards, making for the open ocean. Its source in the gulf is fed by a current from the Caribbean Sea; this in its turn receives its waters partly from the south Atlantic, in the form of a drift current from Africa, and partly from the north Atlantic. Thus there is in the north Atlantic a vast circular movement or eddy, of which the Gulf Stream is the most rapid and the best known part.

In the centre of an eddy, such as we may see in any of our rivers, the water has little or no movement, and to this place is gathered much of the loose floating material which is drifting

with the current. In the middle of the Atlantic there is a great eddy known as the Sargasso Sea. The surface is covered with sea-weeds which, unlike those on the shore, have no root to hold them fast, but float freely on the water, and among these many curious kinds of sea animals have their home.

When Columbus first crossed the ocean to America in 1492, his ships sailed into the midst of this strange sea, to the great alarm of their crews, for the weeds were so thick as to hinder their progress for a time. He discovered the current which enters the Caribbean Sea, and forms one of the sources of the Gulf Stream. The discoverer of the Gulf Stream itself was the famous Ponce de Leon; he went forth to search for a wonderful well on the island of Bimini, which was known as the "fountain of youth." Where Bimini was he knew not, but he had heard that it lay somewhere to the north-west of Porto Rico. Hoping to find the means of cheating time and making the old young again, he sailed out on his vain quest, passing the Bahamas and reaching the coast of Florida, and here he made the acquaintance of this noble "river in the ocean," hardly less wonderful in its way than the fabled fountain of his dreams.

The great Atlantic eddy is due to two causes. The first is the trade winds. Their westerly movement gives rise to the drift currents which enter the Caribbean Sea and which also sweep round outside the West Indies. The second cause is the great heat in that sea and in the Gulf of Mexico. The surface waters are so warm that when the current leaves by the Strait of Florida, it behaves almost as a current of oil would do, floating on the surface of the colder water of the open sea.

When the force of the Gulf Stream is spent, the strong west winds which prevail to the north of the trade wind region keep up the easterly movement of its waters, and give rise to a drift current which forms the northern part of the great ocean eddy. This drift current ends a very important branch towards the north-east, past the shores of Europe and into the Arctic Ocean, a current which was formerly regarded as part of the Gulf Stream. This combined drift of air and ocean has

a great effect upon the climate of Europe; the mild "Atlantic weather" during the winter often makes the coast of Norway, and at times even the south of Iceland, warmer than France and Spain.

Canada is less favoured by the Atlantic. A cold current sweeps down from Davis Strait along the shores of Labrador and Newfoundland, and forms a fringe of cold water near the shore. This current carries with it icebergs from the Arctic seas, whose melting chills the air and the water even in summer, and near the edge of the warmer current this gives rise to dangerous fogs. Along with the water current there is a flow of cold northerly winds, for we usually find that currents in the ocean are accompanied by similar currents in the air.

Icebergs are not desirable neighbours, but they are very interesting and not uncommon sights to those who sail by the St. Lawrence route to Europe in the early summer. Their lofty pinnacles gleam white in the sun, with dark blue shadows marking every crevice. High though they tower above the water, by far the greater part of their bulk is below it. Icebergs have been seen as far south as the drift of the Gulf Stream, moving steadily against its course and heedless of the wind, showing that their base was in the grip of the deep, cold, polar current which had floated them so far.

The Harvest of the Sea

THE icebergs of which we read in last lesson are huge fragments which break off from the ends of glaciers in the Arctic regions. While moving slowly over the frozen land, these glaciers carry with them stones, clay, and gravel frozen into their substance. When the icebergs float away south and meet the warm water and the warm winds of the Atlantic, they gradually melt, and the clay and rocks which were frozen into them fall down upon the sea bottom. The great melting-place of icebergs is off the coast of Newfoundland, and there

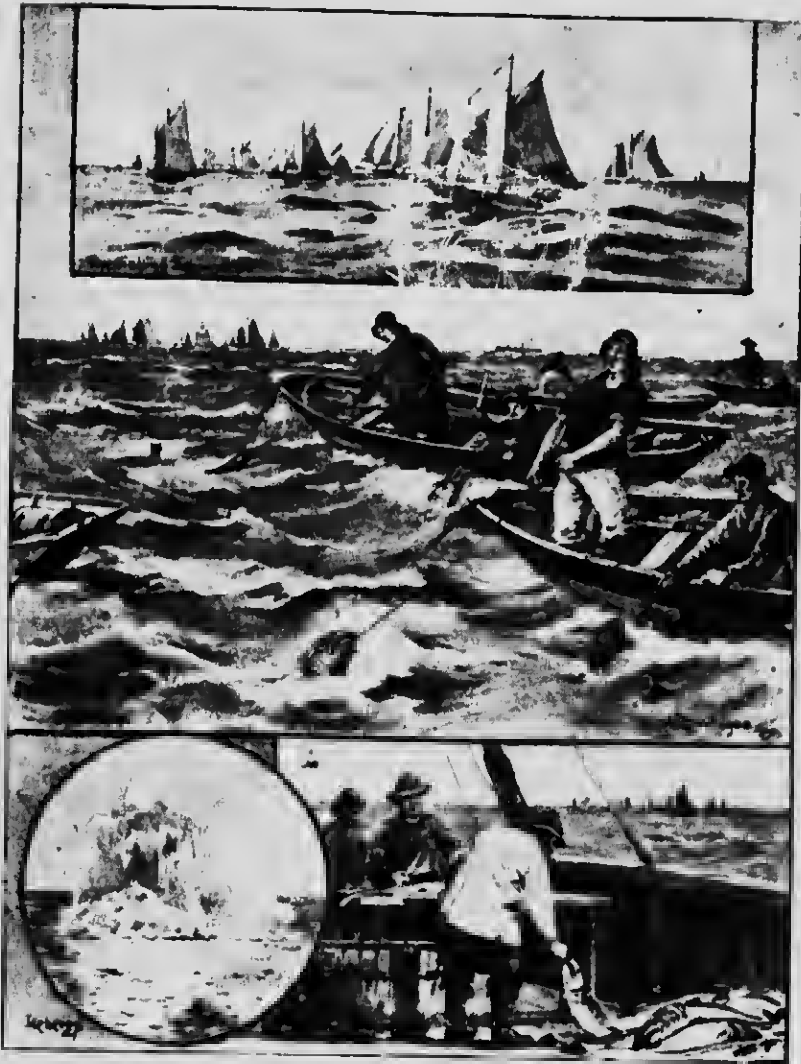
they have formed a great mound of such matter upon the sea bottom. This mound is known as the Grand Banks.

The water on the Grand Banks is only from 60 to 300 feet deep, while the greater part of the ocean is from 10,000 to 20,000 feet. But the most remarkable thing about the Grand Banks is the vast numbers of fish that are found there. The cold Arctic current swarms with tiny living creatures; in some places it is said to be "a living mass, a vast ocean of living slime." The icy current thus carries food to the millions of cod and herring which lie in wait for it on the Grand Banks. But for the shallowness of the water, they would not be found so far out to sea.

This cold current, then, which seems so unkind to our eastern coasts, is really a source of wealth to us, for thousands of fishermen from Newfoundland and the east coast provinces are dependent upon it for their daily bread, just as the farmers are dependent on the warm rains and the sunshine. But the fisherman's bread is not earned without much danger as well as toil.

As we sail along in some great ocean liner, and fog comes down upon us, the captain goes slow in case of collision with other vessels or with some hidden iceberg, and every half minute the hoarse blast of the fog-horn roars out over the sea. We hear a bell tinkling somewhere near, and as the fog lifts a little we catch a glimpse of a small fishing schooner bobbing up and down on the long swell. She is a strong, well-formed little ship, and carries a crew of some six men and perhaps a couple of boys. She left port in May, laden with hogsheads of salt. She will return in September, and if she is lucky her hold will be crammed with salted cod, her share of the great harvest of the sea.

It is a hard harvest to reap, this harvest of the sea. To live for five months on board this small craft, ceaselessly tossed about on the ocean waves, with now a fog and again a storm to keep one on the watch, is not quite a holiday experience. But there is plenty of hard work to take one's mind off the risks he runs. Every morning the men launch



FISHING ON THE GRAND BANKS.

their small boats or dories, taking with them a supply of lines and baited hooks, and leaving, perhaps, only the boys on board the schooner to bait the lines for next day and to do the house-work of their floating home. In the evening the boats return with their catch, and are lifted on board. Then, after a hasty supper, "dressing down" begins. The

great fish have to be split open, cleaned, rubbed with salt, and stowed away in the hold.

The Grand Banks fishery is a hard school for a boy, but it turns out a splendid type of man,—hardy, active, and fearless, ever ready to do his duty and to help his comrade. Rudyard Kipling has given a fine account of life on this ocean harvest field in his story *Captains Courageous*, a book which every hoy ought to read.

There are many other harvest fields in the north Atlantic, for it is round the shores of this ocean that the most industrious peoples of the world have their home. If we cross over to the European side, we shall find another great eod fishery on the coasts of Norway. Here, however, the fish are found nearer the coast, and the boats are therefore smaller than the schooners on the Banks.

All round the British Isles we may pass at certain seasons through great fleets of boats employed in the herring fishery. Some are large sailing-boats, with half-a-dozen men or more, and many are now steamers or motor-boats. Each boat carries a large number of nets which hang from a huoyed rope a little way beneath the surface of the sea. The herrings, swimming in vast shoals near the surface, are caught by millions in these nets during the night-time, and every morning the boats make for the shore with their catch.

Still nearer the shores small fish called pilchards often appear in dense shoals near the surface, so near that their movements can be seen by men watching on the cliffs. Boats row out and surround the mass of fish with a long line of nets, and the men scoop them out of the water into the boats. On the French coasts the small fish known as sardines are caught in a similar way.

The shallower waters of the ocean swarm with fish almost everywhere. The variety of kinds, and the different modes of catching them, would take a whole hook to describe. The reapers of this ocean harvest on the Atlantic alone number hundreds of thousands of men, and next to the harvest of the land it is our most important source of food.

The Kuro Shiwo

LET us now turn our eyes westward, and see something of the vast Pacific Ocean, which bounds the Dominion on the west. British Columbia lies in the same latitude as Newfoundland and the east coast of Labrador, but there is a remarkable difference between them in climate. On the Atlantic coast are icebergs, frozen bays, stunted shrubs and hardy plants and grasses. On the Pacific coast are noble forests, luxuriant pastures, and a climate almost free from winter frosts. The trees of the west coast are famous all over the world for their great size.

Our Atlantic coast, as we have seen, is somewhat harshly treated by the ocean; the polar current and the northerly winds make the climate much colder than it would otherwise be. The Pacific coast, on the other hand, is specially favoured by the waters which wash its shores. Not only is it free from any polar drift, but it enjoys a climate modified by the warmth of a great Pacific current—or rather two currents, for the ocean current is itself produced by an atmospheric current which flows in the same direction and produces even more beneficial results.

The waters of the north Pacific, like those of the north Atlantic, move in a vast circular current or eddy. Near the equator this current flows westwards from Mexico towards the coast of China, under the steady influence of the trade winds. Off the coast of Asia the current turns northwards past the island empire of Japan. It is a warm current, like the Gulf Stream, and gives these islands an equable climate, much milder than that of the mainland opposite.

A part of this warm stream drifts eastwards to our own shores, urged on by the great air current which blows from the westward, and, dividing as it nears the land, sends a branch northwards past Vancouver and the other islands on our western coasts. This warm current, with the mild and moisture-laden winds which drive it along, gives to these coasts

their equable and somewhat rainy climate, different alike from that of the interior and of the Atlantic coast regions. So far north does this influence extend that even in Sitka Island in Alaska, which is almost as far north as Cape Farewell in Greenland, there are grand old woods where firs grow to a great size.

The warm ocean current is called by the Japanese the *Kuro Shiwo*, or black current, from the dark tint of its waters. Not only is the Kuro Shiwo a carrier of warmth and moisture : some people suppose that it also carried the first human inhabitants to America. Many years ago the people of Sitka noticed one morning a strange-looking craft which had drifted ashore. It was a Japanese junk, dismantled and water-logged, and, strange to say, the ten or twelve Japanese who were found on board were still alive, though nearly dead with exposure and famine. This junk had been dismantled near the coast of Japan, and had drifted helplessly with the current and the steady westerly winds till it reached the American shores. There are traditions that on two former occasions Japanese or Chinese junks have been found farther to the south, carried across the Pacific in the same way. How often such accidents have happened in long-past ages no one can tell.

It is believed by many people that the Indian tribes of North America are of the same race as the early inhabitants of Siberia and Japan. Did the Kuro Shiwo bring them? The story of the sea-borne wreck seems to make it at least possible. It is at any rate certain that this great Pacific current brings to our western shores the perpetual gift of its wonderfully mild and equable climate. The mild West has long been Nature's great experimental garden, where she has tried to show us how large the timber trees of the temperate regions can grow. Now man has followed Nature in his experiments, and is trying to show how this ocean gift can be turned to use in growing other trees, whose excellence is not in their size but in the fruits they yield.

Coral Islands

THE Pacific Ocean is not so well known as the Atlantic; the nations on its shores are not so much given to trade. When we examine the map, we see that there are fewer great rivers flowing into it; and rivers, in the days before railways, were the great trade routes. Besides, it is only a very few centuries ago that this ocean became known to us—that is to say, to men of the white or European race to which we belong. Its waters were first seen by one of the early Spanish adventurers in America—

“ When with eagle eyes
He stared at the Pacific—and all his men
Looked at each other with wild surmise—
Silent upon a peak in Darien.”

The first European ship to plough its waters was that of Magellan, the Portuguese captain of a Spanish fleet. He made his way from the stormy seas of Cape Horn through the winding strait which bears his name, and reached the great unnamed ocean beyond. He and his men might well have sung

“ We were the first that ever burst
Into that silent sea,”

for they seemed to have left all storms behind them. For nearly four months they sailed over a smiling sea, unruffled by a single storm, and they felt justified in calling it the Pacific or Peaceful Ocean.

The most striking feature of the Pacific Ocean, especially in the tropical regions, is its thousands of small islands. Most of these are coral islands. Coral is a substance composed mostly of lime, which is made from the sea water by a soft jelly-like creature called a polyp, much in the same way as other soft sea animals build up shells of lime round their bodies. The coral polyps live together in colonies, and they build up a solid base of coral, at the top of which they have



PILCHARD FISHING.

*(From the picture by C. Napier Henry, A.R.A., in the Walker Art Gallery, Liverpool.
By permission of the Corporation of Liverpool.)*

their home. Thus a piece of living coral often has the form of a branching tree of limestone, with a living flower-like tip on every twig.

The coral polyp is found chiefly in the warm waters of the Pacific and the Indian Ocean. It builds on rocks round the coast; it cannot live above water, or in very deep water. Hence the coral is found usually in the form of a reef running parallel to the shore. Blocks and fragments of the coral are broken off by the ocean waves and thrown up on the top of the reef until it becomes a beach of coral rock and sand. Then nuts and seeds which are washed ashore or carried by birds begin to take root and grow up, and so a coral island is born.

Over certain parts of the Pacific the level of the land surface is gradually sinking. As this goes on the coral reef seems to move further away from the shore. So the Great Barrier Reef which fringes the north-east shore of Australia is now at a distance of from ten to twenty, and in parts as much as a hundred and fifty miles, from the land.

If a coral reef is formed round an island, which then slowly sinks into the sea, the coral will go on growing until it becomes a wide ring, broken here and there by the waves and the tide, with nothing but a smooth lagoon in the centre. There are many such islands in the Pacific—atolls, as they are called—and very beautiful they appear. A low, narrow strip of land crowned with a thick growth of cocoa-nut palms and other tropical vegetation, and fringed with a beach of white coral sand, divides the dark blue heaving ocean from the peaceful, emerald lake within. The bottom of the lagoon is

(1,580)



CORAL POLYPS.

covered with living coral of every variety of shape and colour. Seen through the clear water, or, better still, seen from below the water, it is an enchanted garden. There are coral growths like huge mushrooms, bulks with curiously wrinkled surface, and branching trees of a snowy white or a pale pink. Among these rise graceful sea-weeds of rich tints, while the water swarms with fishes, many of them gaily coloured and striped with blue, red, yellow, and green.

Many of the larger islands of the Pacific are volcanic, with steep and lofty mountains, the coral forming only a fringe or barrier round their shores. These volcanic islands are usually very fertile; the ease with which a living can be found makes life a perpetual holiday, while the tropical climate tempered by the sea winds makes the year a perpetual summer. The natives are for the most part of the brown-skinned Polynesian type, often very handsome in form and pleasing in manner. Nowhere has finer work been done by Christian missionaries than among this people. Only a few years ago the natives of many islands were cannibals, living in a state of constant war; they are now a peaceful, well-behaved people, free from many of the vices of our own land. Some of the southern groups are inhabited by people of the darker Melanesian type, among whom civilization is not so far advanced.

The South Sea Islander is usually a splendid swimmer. The children learn to swim almost before they can walk, and they grow up to be as much at home in the water as on the land. It is not only in the calm water of the lagoon that they practise swimming and diving, but outside the reef as well, where the long swell of the ocean, urged by the constant trade winds, breaks in thunder on the shore. When the waves are higher than usual, whole villages sometimes spend an afternoon in the daring sport of surf-playing. In Hawaii a "wave sliding board" is used for this purpose. It is made of light strong wood, equal in length to the swimmer himself, and about a foot wide.

Each person, taking his swimming-board under him, plunges into the surf and strikes out for deep water, half a mile or

more from the shore. Arrived at last at the outside of the fringing reef where the waves first begin to break, he turns, extends himself at full length upon the board, facing the shore, but casting quick glances behind him watching for a larger wave than usual to ride upon.

Three or four waves pass, but he laughs at them, though the smallest would have dashed over an ordinary swimmer and drowned him. At last he sees a mighty hallow approaching,—it is the very king of waves! With crest high in the air, its liquid edge trembling in the sunshine, it sweeps down upon the swimmer with a thundering roar. For an instant it draws him back towards itself; then snatching him up it hurls him towards the shore. He lies upon his board on the sloping front of the wave, his head downwards and his feet slanting up into the flashing foam which now half covers him. A score of his companions are dashing madly onwards beside him, their shouts of glee scarcely heard amidst the thunder of the breaking wave. You look to see the swimmer dashed against the shore. There seems no escape for him,—when suddenly he disappears from sight. By a quick backward movement he retreats into the heart of the wave, and soon he reappears on the seaward side of the breaker that now shatters itself in foam upon the rocks. His head is already turned from the shore, and he is again making his way into deep water to mount another hallow.

The children have a number of games which they play in and under the water as fearlessly as our children gambol in the school playground. One is a kind of "tig," in which the side that is "in" try to reach two or three successive stations or bases without being touched by any of the "out" side. High diving is another favourite form of water sport. This is carried on where there is a perpendicular cliff with deep water below. When practised by such skilled and daring swimmers, no athletic feat can be more beautiful.



THE NORTH-WEST PASSAGE—"IT MIGHT BE DONE, AND ENGLAND SHOULD DO IT."

(From the painting by Sir John Millais, in the Tate Gallery.)

The North-West Passage

“ Seamen of old, true-hearted and bold,
Honour to you for aye!
’Gainst shoal and floe, in the realm of snow,
Ye fought for an ocean way.

“ Grim heroes all, your voices call
While ever the waves leap high,
Inspiring the creed of an Island breed
That has learned to dare and die.”

IT seems strange that the great double continent of America should have been found by accident—found by one who was seeking something quite different. It seems still more strange that after it was discovered, European sailors looked upon it as merely an obstacle in the way, keeping them from the fabled wealth of the Indies. Their desire was not so much to explore America as to find a sea-road round it, or through it.

The route round Cape Horn, or through the Strait of Magellan, they found to be possible, but long and difficult. The St. Lawrence, with its open gulf and spacious lakes, was explored—the name of the La Chine Rapids yet reminds us of the hopes of its explorers—but no passage to China or the Indies lay in that direction. The Arctic Ocean remained to be examined. Through this frozen sea there might exist a north-west passage to the shores of India and China.

In one of the picture galleries of London there is a fine painting, which reminds us of this long search for the North-West Passage. In his arm-chair by a window which looks out on the sea sits an old sea-captain who has come to anchor in this snug haven after a long seafaring life. His mind is still on the sea, and his charts are near at hand. By his side, clasping his hand, sits his daughter, reading aloud the story of the many brave attempts to find the North-West Passage. He follows on the map the voyages that have been made, and at last he cries, “It might be done, and England should do it!”—It has been done, and England has done it. Long

before the route was discovered, men saw that it could be of no use to trade. But the attempts to explore the northern shores of Canada and settle the problem of the North-West Passage led to the exploration of the frozen Polar Sea.

It was during the early part of the nineteenth century that the North-West Passage seemed to draw men most strongly, though the quest was even then two centuries old. The tales of hardship endured in that frozen sea on board ships ill fitted for Arctic exploring bear noble witness to the dogged courage of our race. Martin Frobisher, a pioneer of such adventures, tells what he experienced in the strait which bears his name : —

“ We had a fair open place without any ice for the most part, being a league in compass, the ice being round about us and enclosing us as it were within the pales of a park. In which place we minded to take in our sails and lie all that night. But the storm so increased, and the waves began to mount aloft, which brought the ice so near us and coming so fast upon us that we were fain to bear in and out, where we might espy an open place. Thus, the ice coming on us so fast, we were in great danger, looking every hour for death. At the last, one of our small barks, being but a weak ship and bruised afore among the ice, being so leaky that no longer she could tarry above the water, sank without saving any of the goods that were in her ; which sight so ahashed the whole fleet that we thought verily we should have tasted of the same sauce. But, nevertheless, seeing them in such danger, we manned our boats and saved all the men in such wise that not one perished, God he thanked.”

Davis, Hudson, Baffin, and others carried on the quest, their names on the map standing both as memorials of the men and as milestones on the arduous road. It was left for Sir John Franklin, however, to trace the sea route from our eastern borders towards the known coasts near Bering Strait. In 1845 he set sail from England, full of hope ; in Melville Bay the expedition was spoken by a whaler a few weeks later ; and then the dark curtain of the polar night

seemed to fall upon them. Two years passed without news, and then it was decided to send out an expedition to search for Franklin and his men. During the next ten years thirty-nine separate expeditions were sent out, and at one time no less than fifteen ships were in the Arctic seas either seeking for the lost explorers or trying to complete their work.

Relics were found here and there, and rumours were heard among the Eskimo tribes, but it was left to Dr. John Rae, a factor of the Hudson's Bay Company, to discover their fate, and to learn that ere Franklin's gallant band had perished in the Arctic cold they had actually traced the course of the long-sought North-West Passage.

" The Polar clouds uplift --
 A moment and no more--
 And through the snowy drift
 We see them on the shore :
 A band of gallant hearts,
 Well-ordered, calm and brave,
 Braced for their closing parts,
 Their long march to the grave.

" Through the snow's dazzling blink,
 Into the dark they've gone ;
 No pause : the weaker sink,
 The strong can but drive on,
 Till all the dreary way
 Is dotted with their dead,
 And the shy foxes play
 About each sleeping head."

The quest which had begun for the purposes of trade was continued for the sake of exploration alone, and since Franklin's time the Arctic Ocean has been the scene of many a daring adventure. The coasts have been traced on every side ; the North-East passage, by the north coast of Europe and Asia, and the northern limit of the great ice-covered island of Greenland. At last all that was left to explore was the central basin round the pole, and finally the pole itself.

The Arctic Ocean, ice-bound as it is, has like the other oceans a steady drift or current in its waters. This current

sects from the neighbourhood of Bering Strait towards Greenland. The fragments of an exploring ship, the *Jeanette*, which was crushed in the ice near the New Siberia Islands, were found some years later on the Greenland coasts. Taught by this experience, a daring Norwegian, Fridtjof Nansen, had his ship, the *Fram*, purposely frozen in among the ice near the same place, hoping the drift would carry him across the pole. His plan almost succeeded: he missed the pole by some two hundred and fifty miles, but the two winters spent in these regions gave time for gathering much knowledge of the ocean, and of the movements of the ice-pack.

An American explorer, Peary, who spent many years in Arctic exploration, found that the best aid to ice travel was the Eskimos and their dogs. Time after time he returned to the North, making many journeys by dog-sledges and living in the Eskimo igloos, till at last he saw his way to make a dash for the pole itself. He divided up his party, sending some in front to prepare the way, while others brought up stores, and returned when their work was done. By the time he had come within a hundred miles of the pole only one white man remained in his party.

Then reserving for himself alone whatever glory might flow from a first visit to the pole, Peary sent back his last white comrade and went on with his Eskimos. When he returned he reported that he had been able to reach that long-sought spot on the earth's surface by travelling at a speed far greater than had previously been found possible. The pole, we must remember, is a purely imaginary point, and the white surface of the thick-ribbed ice gave no hint of its presence; all was an unending frozen expanse.

A visit to the pole does not, of course, add much to our knowledge of the polar seas, and there are great tracts of ocean which still remain unexplored. It seems probable, however, that the whole Arctic Ocean is a moderately deep expanse of ice-clad sea, without any considerable islands, and without any open water such as was once supposed to exist round the pole.

Have you ever thought how odd a place the pole would be to live at? It is a place where there is no east or west, for every other spot on the earth's surface lies due south from it. Once a year, in March, the sun rises, and then for three months it is forenoon all the time. Midsummer brings the annual noontide, and then begins a three months' afternoon. In September comes the slow yearly sunset, followed by the six months of polar night.

In the Antarctic

IN many things besides its position the Antarctic Ocean is the opposite of the Arctic. The Arctic Ocean, as we have seen, is almost landlocked, the great continents meeting round the frozen sea in a circle with a radius of some two thousand miles. A circle drawn round the south pole with a radius of three thousand miles touches no land whatever; a belt of open sea stretches all round the pole. The Arctic explorer can rely on the help of Eskimo hunters far within the frozen zone: the nearest inhabited land to the south pole has no higher latitude than that of the British Isles in the northern hemisphere. Around the north pole is an ice-bound sea, with land on every side. At the south pole is a mass of snow-elad land, encircled by a cold and stormy polar sea. The southern region is also much more barren of animal life than the northern; the seal and the penguin are found in plenty during the summer, with a few sea-birds of strong flight, but none other of the higher animal types are seen. Even the whales of the southern seas do not make the ice-bound waters their home. Of vegetable life there is practically none.

The exploration of the Antarctic was much later in beginning than that of the Arctic. The southern regions lie far out of the track of commerce, and there was no profit to be looked for in voyages thither. For a time it was thought that a vast continent lay round the south pole, extending as far northwards as Australia. Captain Cook was the first to

cross the Antarctic circle, and his voyages showed that no such continent existed.

Later voyagers found, however, that all approach to the pole was prevented by a great ice barrier, which seemed to have no opening. This great cliff, in some places 300 or 400 feet high, is made up of layers of hardened snow and ice, as if formed on high ground and gradually pushed out seawards. The icebergs of the southern seas have a very different appearance from those of the north. Instead of the towers and jagged pinnales which we see in Arctic pictures, they show a flat table-like outline, and are frequently of enormous size. They are, indeed, great masses of the ice barrier broken off from its seaward edge, and carried away by winds and currents.

Under the vast ice-cap lies a great polar continent of which as yet but little is known. It consists, so far as we can learn, of a lofty plateau, reaching a height of eight or ten thousand feet, and broken here and there by ridges of mountains. Over this desolate and storm-swept region lies the road to the south pole. Already several gallant attempts have been made to reach that pole, and that of Shackleton only failed through want of sufficient provisions for the journey.

The weather on this polar plateau, even during its summer season, is probably the worst in the world. Instead of the calms which are common in the far north, the southern adventurers met blizzard after blizzard, when travel was impossible, and they had to waste both time and provisions lying shut up in their tent.

Taught by the failures of others, some daring explorer will no doubt fight his way safely to the south pole. But his struggle will be made in the cause of science alone, in order that we may know a little more than we do at present about the surface of the earth on which we live. We already know enough of the Antarctic to show us that it is too bleak and inhospitable a region ever to be the abode of man, and there can be little hid beneath its ice and snow that will be of any service to him. But men face danger and death as readily for the sake of knowledge as for gold.

Monsoon Weather

WE have glanced at four of the great oceans—the Atlantic with its currents and its commerce, the Pacific with its coral islands, the Arctic with its drifting ice, and the Antarctic with its great snow-capped continent. The fifth great ocean yet remains—the Indian Ocean—and of it we shall find the most interesting feature to be its winds. We have seen that both in the Atlantic and in the Pacific the great ocean currents and the air currents which drive them forward have an important influence upon the climate of their shores, and thus count for much in the lives of those who inhabit the coast lands. We shall now see how great air currents alone can modify climate, and make or mar the fruitfulness of the lands over which they blow.

If we look at a globe or a map we see that the Indian Ocean lies almost wholly within the tropics. The southern portion, which merges into the Antarctic, forms part of that world-encircling belt of open sea of which we have already spoken. The lands which border this ocean are all tropical or hot lands—parts of Africa, Arabia, India, the East Indian Islands, and Australia. The equator, the line of greatest heat, crosses the Indian Ocean, and on either side of it we find those steady converging currents of air which we call the trade winds.

In the other oceans the line of greatest heat changes its place a little with the seasons, being farther north than the true equator during our summer, and farther south during our winter. But as summer comes in, a sudden change takes place to the north of the Indian Ocean. The dry barren lands in the centre of Asia, though lying outside the tropics, become extremely hot, and accordingly the line of greatest heat now lies over the land to the north, and quite beyond the limits of the ocean itself. This great heat causes an uprush of air as from a vast bush fire, and the course of the trade winds is quite altered. The south-east trade, following up the movement of the heat-equator, now sweeps northwards

over the whole ocean, bending towards the east, and it keeps this new course throughout the summer. During this monsoon period, as it is called, the wind blows strong from the sea on the west coast of India, and no coasting craft can leave harbour. The moisture which it brings descends in torrents of rain on the ridge of the western Ghats, and welcome showers drift all over the land. Should the monsoon prove weak, famine falls upon the crowded population.

At the change of the monsoon in May, and again in October, when the trade winds return to their usual courses, there are often violent storms. These are known as cyclones or typhoons, and like those of the north Atlantic they are really vast whirlwinds moving across the sea. The summer monsoon, as we have said, brings to India the main part of its rainfall, which is in some districts the highest in the world. At one station over 800 inches have been recorded in a year. Winter rains fall only where the winter monsoon, the regular north-east trade wind, blows over a stretch of sea before it reaches the land.

The island of Ceylon, which lies far out in the centre of the Indian Ocean, is favoured with both summer and winter rains, and is therefore one of earth's natural gardens. Yet even there the summer monsoon rains are of chief importance. In March and April the ground becomes dry and parched; the winter rains are almost forgotten. Vegetable life languishes; trees shed their leaves, and the grass is parched and withered. The insects burrow in the soil or hide in crevices; even the fish take refuge in the mud of the fast-drying pools. Butterflies have disappeared; the birds are fewer and more quiet in their manner. Wild beasts venture to approach the village wells in search of water.

The air becomes heavy and oppressive, and even the natives move languidly about their work. The sky loses its vivid blue; clouds rest against the hillsides. At last the change arrives. Lightnings flash from cloud to cloud, and from hill to hill, and with a crash of thunder the monsoon bursts upon the thirsty land. The rain comes down, not in showers or in

local torrents, but in one wide universal deluge. In a few hours every water-course and river is full from bank to bank, and every level plain is a lake. The noise of the downpour beating on the ground, the trees, and the roof overhead is so loud that conversation cannot be heard, and sleep is impossible.

This atburst, however, is not of long duration. After a few hours it seems to have spent its force. It subsides in alternate fits of violence and of calm, and the blue sky reappears. For some time there are heavy showers in the morning, followed by fair evenings and sunsets of glorious splendour. The heat is less oppressive; a cool and steady wind blows from the south-west, bringing with it frequent showers.

The earth awakes as at a magic touch. In ponds where only a few days ago clouds of dust were whirling from the dry and sandy bed, the peasants are now catching the fish which have been aroused from their hiding-places. The earth seems in a single day to resume its tinge of green; trees are budding and putting forth new leaves. All the life of nature is flowing on in a restored current.

The value of this ocean wind to human life and industry may be seen if we compare this picture of the south of India, where both monsoons are rain winds, with the north-west of the same country, where neither wind brings moisture. There we find a plain which is really a desert. The scattered showers are too few and slight to maintain the growth of crops. Only where canals have been dug to carry water from the nearest river is it possible for human beings to live. Where water is, the soil is abundantly fertile. All that is wanting to make this arid plain also a garden is the influence of that great life-giving current of moist wind from the Indian Ocean.

NORTH AMERICA.—I

America—Surface and Climate

THE New World, as we see it on a globe or on a map, consists of two great land masses or continents, joined together by a narrow strip of land. These two continents are North America, of which the region called Central America really forms a part, and South America. The two Americas are very much alike in some respects, and quite unlike in others.

In general outline the two masses are not unlike. Each continent is broad towards the north and tapers towards the south. The elevation of their surface is also somewhat similar; each has a belt of lofty mountains on the western border, broadening into a plateau region in the middle of its length; then a wide expanse of level plains, and finally a region of lower mountains towards the Atlantic coast.

As a result of the similar position of their mountains and plains, the two continents have also a similar arrangement of rivers. None of very great importance falls into the Pacific; in each continent there are two great rivers flowing towards the Atlantic, one with a south-easterly and the other with a north-easterly trend; in each there is also a group of rivers of less importance flowing in a northerly direction.

The differences between the two continents, however, are of more importance, and these differences are mainly due to latitude. Latitude, or distance from the equator, is what chiefly determines the amount of heat which any place receives from the sun. Now when we look at the map of the New

America—Surface and Climate 53

World we see that the equator crosses South America near its broad end, and that more than half of its area lies within the tropics. The broad end of North America, on the other hand, touches the Arctic Circle, and only a part of its narrow end is tropical. North America, therefore, is almost wholly a temperate region, while only the southern portion of South America is so. This gives the northern continent a great advantage over the other, for it is in temperate lands that men and nations grow strongest, and in them white men find the kind of home that suits them best.

We may sometimes think it would be pleasant to have no need to work hard for a living; we should like all our food-crops to grow for us by nature, without ploughing or sowing; if there were no winter, we should not need to store up food,



but could gather it from day to day ; if there were no cold, our clothes and our houses would cost us little trouble. There are countries where people can live without much work of any kind, but their easy life makes them unfit for anything else. The need for striving and planning and enduring has made the men of temperate lands strong and intelligent and helpful to one another. It has made them civilized, as we say ; able not only to make a living, but to live together in cities and states, and to follow after knowledge and justice and beauty and all that the mind needs for its nourishment.

Next to warmth from the sun, a country depends chiefly on its rainfall for producing the food that its inhabitants require. A moderate rainfall is as necessary as a temperate warmth in lands where civilized men make their homes. Let us glance at the American continents and see how they meet this need of their inhabitants.

We have already seen that rain is a gift of the sea. Vapour rises from the ocean surface into the air, and when it becomes cooled it forms clouds and falls as rain or snow. Hence every country depends upon sea-winds for its rainfall. When a sea-wind meets a coast range of mountains, as in British Columbia, it is chilled in passing over the mountains and leaves most of its moisture there ; it then passes over the rest of the country as a dry wind, having little more power to water the soil. The windward side of a mountain is therefore better watered than its leeward side.

When the sea-wind passes over wide plains or a long gentle slope before coming to a mountain ridge, it parts with its moisture gradually, and the whole extent between the mountains and the sea shares in the rainfall. We see this in South America, where the moist Atlantic winds blow over its wide plains before reaching the range of the Andes. But after passing over the Andes, they are so dry that the Pacific slope of these mountains is almost a desert unless where watered by mountain streams. In the far south the case is reversed : there the winds blow from the Pacific, and it is on the eastern slope that the dry plains are found.



IN THE ANDES—MOUNT ACOSCAGUA.

56 America—Surface and Climate

Central America is everywhere far from the sea, and has besides an almost tropical heat. It has sea-winds from both sides, and its rainfall is therefore very abundant. The greater part of North America receives its rain-winds from the Atlantic and the Gulf of Mexico. You can therefore tell at a glance that the eastern hills and slopes will be well watered, but that the western plateau, especially in Mexico and the south-western states, can have only a scanty supply. The whole western half of the continent is dry and in some parts barren on account of its dryness, until we come north to the Canadian boundary, where the moist Pacific winds blow, and make British Columbia one of the most fertile areas of the world.

Now let us combine these two influences—heat and moisture—and see how the two together affect the various parts of the New World as a home for men. In the extreme south of South America, the cold and stormy climate has reduced the few native tribes to a savage state of life; they can barely find a living among the scanty natural products, and few white men have tried to make a home there.

Next comes a temperate region, too dry in the south, but better watered towards the north, chiefly occupied by the Republic of Argentina. This is a thriving land of stock ranches and wheat farms. As we move still northwards, we pass from a wide stretch of grassy plain or prairie to a still wider stretch of tropical forest, the vast plain of the Amazon. Here great heat and great rainfall combine to produce a vegetation unequalled for its richness and variety. Yet it is not a white man's country, for the climate is unhealthy.

On the western border the great ridges and plateaus of the Andes have a very different climate. The mountains are so high that even at the equator the heat is that of a perpetual spring rather than a tropical summer. Here there are states where civilization is well advanced, their chief hindrance being the difficulty of communication across the lofty mountain ranges.

In Central America we find a coast belt of low ground with tropical rains and heat, and more elevated and temperate

tracts in the interior, and the population shows a corresponding difference. In the plains half-civilized natives live, and on



RELIEF MAP OF NORTH AMERICA.

the higher ground a white race at a more advanced stage of progress.

The broad table-land of Mexico gives a better field for a
(1,580)

white man's life, and here we see a nation far advanced in civilization. Even before the coming of the white man this region had a large population well skilled in the useful arts. It is a land of great fertility in parts, and well suited for the homes of men. Its wealth in the precious metals is of great advantage in trade with other lands.

The United States may be regarded as a temperate region throughout, though the Gulf coast is almost tropical. It is favoured beyond most lands in the variety of its climate and its products, and nowhere is there a more suitable area for the habitation of man. Of its various natural divisions, due to differences in warmth, moisture, and elevation, we shall have to speak more fully by-and-by.

The Dominion of Canada, our own home, will also be described more fully in other chapters. Over the greater part of its area the conditions of life are similar to those in the United States. With the exception of the Arctic belt in the far north, the whole of Canada is suitable for the support of a white population. It is only the southern fringe of our territory that has yet been occupied.

The climate of Canada varies from the warm temperate to the severe Arctic. Its rainfall is moderate throughout. On the Pacific coast it is abundant, and is so distributed throughout the year as to avoid the disastrous floods and torrents which occur where a heavy rainfall is confined to a few weeks of the year. On the Atlantic coast and in the St. Lawrence basin the moisture is ample for all kinds of agriculture. In the centre it is less in amount, but the drought is rarely serious, and the people are learning how to meet it by special methods of farming.

The Surface of Canada

LET us now look more closely at the natural features of our great Dominion, remembering that though it is separated from the rest of the continent by fixed boundaries,

these boundaries are not geographical but political. Our people have a history different from that of their neighbours, and they live under a government of their own which is also different; but much that we have to say of the natural features of Canada is also true of the United States.

Let us begin our survey at the Atlantic coast. The east coast provinces, we see, are neither mountainous nor level, but may rather be described as hilly, or upland and valley mixed. This part is the northern end of those Appalachian



NATURAL REGIONS OF CANADA.

ridges which occupy the eastern states. The whole region is seamed with valleys, most of which run from north to south, or north-east to south-west. The ends of these valleys form long bays, as in the Bay of Fundy, the Bras d'Or in Cape Breton Island, the bays and fiords of Newfoundland, and the mouth of the St. Lawrence.

On the north side of the St. Lawrence is a vast plateau, which begins to rise almost from the edge of the river. This plateau consists of a very hard rock, which also forms the island of Newfoundland. The highest part of the plateau, rising to more than fifteen hundred feet, lies towards its southern

edge. This ridge of high ground begins near the centre of the Labrador Peninsula, and sweeps round parallel to the St. Lawrence, terminating to the north of Lake Superior. It forms the "height of land" which divides the rivers flowing into the St. Lawrence and the great lakes from those which flow into Hudson Bay.

This rocky plateau faces the Atlantic along the Labrador coast in a broken but bold coast-line with many deep inlets or fiords. Towards Hudson Bay it sinks down into a low flat plain, somewhat narrow on its eastern shore, but extending far inland to the south of James Bay. This plain also borders Hudson Bay on the west, where the rivers have flat lower courses and shallow mouths. For two hundred miles inland in this direction the land does not rise more than five or six hundred feet.

West of the great lakes we find ourselves entering upon the region of the prairies or great plains of Canada. We leave behind us the rocky plateau with its forest growth and its thousands of streams and lakes, and see in front a boundless stretch of rich soil, treeless for the most part, but deep in grass or farm crops, where we may travel for days without seeing a single rock or stone. This region stretches before us for nearly a thousand miles with little change in its appearance.

However level it may seem to the eye, the great prairie land varies much in height. By gradual stages we are carried up and up till, when the Rocky Mountains begin to show their jagged, snow-capped ridges above the horizon, we are no less than three thousand feet above sea-level. The southern boundary of Canada runs across this prairie belt near its highest part. Southward the ground slopes gently to the great Mississippi basin. The Canadian prairie rivers flow towards the low Hudson Bay coast, except in the north, where the slope is to the Arctic Ocean.

The western or mountain region next rises before us, four hundred miles wide at its southern end and somewhat narrower towards the north. This region is sometimes spoken of as "The Rockies," but the Rocky Mountain range is only one of

those which make up the Cordilleran system of North America. It is the Rockies and their foot-hills that are first seen from the prairies, a vast ridge running from Mexico to the Arctic Ocean, much of it over 10,000 feet high, with peaks that exceed 14,000 feet.

On the Pacific coast there rises another great range, known as the Coast Range or the Cascade Mountains. The space between these two parallel ranges is a maze of great mountains, plateaus, river valleys, lakes, and canyons. The main valleys run parallel to the coast, so that the rivers in this region have long and winding courses, flowing sometimes north and sometimes south, and cutting deep and narrow gorges across the ridges that bar their way to the sea. Some of these intermediate ranges, such as the Selkirks, surpass the Rockies in the wild grandeur of their scenery.

From this rapid survey of the Dominion we see that its relief, or arrangement of high and low ground, is extremely simple. There are few features to note, but these are all on a vast scale. Only in the mountain region is there any complexity. This gives Canada a great advantage as to its rivers, which are of much importance as a means of communication.

South of the Laurentian Plateau there is the vast drainage system of the great lakes and the St. Lawrence, forming a clear waterway into the very heart of the continent. It was by this road that civilized settlers first entered Canada; this road, improved by canals where necessary, will remain her most valuable highway, and along its course have arisen the great centres of industry and trade.

The second great river system centres round Lake Winnipeg. In long-past ages this lake must have been larger than it now is, but it still receives the drainage of a wide area of country. From the south come the Winnipeg River, and the Red River, with its tributary the Assiniboine; from the west comes the Saskatchewan, whose two branches with their tributary streams flow from the slopes of the Rocky Mountains across the whole width of the prairies. The great volume of water which is

thus poured into Lake Winnipeg finds an outlet by the Nelson River into Hudson Bay.

To the north of the Saskatchewan begins another great drainage slope—that of the Mackenzie River. From the snows of the Rocky Mountains three important rivers flow out on the plain—the Athabaska, the Peace River, and the Liard. Their combined flood finds its way to the Arctic Ocean by the Mackenzie River, in whose basin lie several lakes of great extent—Athabaska, Great Slave Lake, and Great Bear Lake. The rivers of the western mountain region are of less importance to trade, their current being rapid except near the coast.

The climate of Canada is wonderfully uniform when we consider its vast area. This is due largely to the absence of mountain barriers. Only in the far west are there any great contrasts between one district and another. Our climate is mostly of the type called continental; that is, it is not affected by the ocean, as in countries which border the sea. We have already seen that British Columbia and the Atlantic coast provinces are affected by the ocean in opposite ways, but by far the greater part of the Dominion has a continental climate.

This type of climate is usually less moist than a coast climate; it has also greater extremes of cold in winter and of heat in summer. In North America the absence of mountains in the interior permits the free movement of air from north to south; hence the cold winter air spreads far to the southwards, while in summer the air from the Gulf of Mexico often carries great heat-waves north over the plains. But whether cold or hot, our climate is everywhere healthy. It is a pleasant climate to live in, and produces a strong and active type of men and women.

We have yet to consider the Dominion with respect to its natural plant products. Most of Canada is covered by a great natural forest belt; in the north the trees are of the coniferous or cone-bearing type—fir, spruce, and pine. Towards the south these are mixed with hard-wood trees of the deciduous type, which shed their leaves on the approach of winter. In the mountain region, the coniferous

type holds its own from north to south, and, favoured by the moist climate, the firs, pines, spruces, and cedars grow to an enormous size on the low grounds and clothe the mountain-sides thickly for hundreds of feet up towards the snows.

As we approach the Arctic shores we find the forest becoming thinner and the trees more stunted, until we reach a line beyond which they can grow only in the shelter of the river-valleys. Then comes the region of the "barrens," a waste of rough stony plain, covered in parts with coarse grass and



hardy bushes, or only with the mosses which grow on the borders of swamps and rivers. This barren zone sweeps round the shore of Hudson Bay as far as the Nelson River, and on the east it covers the northern part of the Labrador Peninsula.

There is one very important break in the Canadian forest belt; this is found in the south, between Lake Winnipeg and the Rocky Mountains. Here, as we have seen, the forest gives place to wide grassy plains, once the haunt of innumerable buffalo, and now being rapidly covered with wheat farms and stock ranches—the district which is specially named the prairies.

The Oldest British Colony

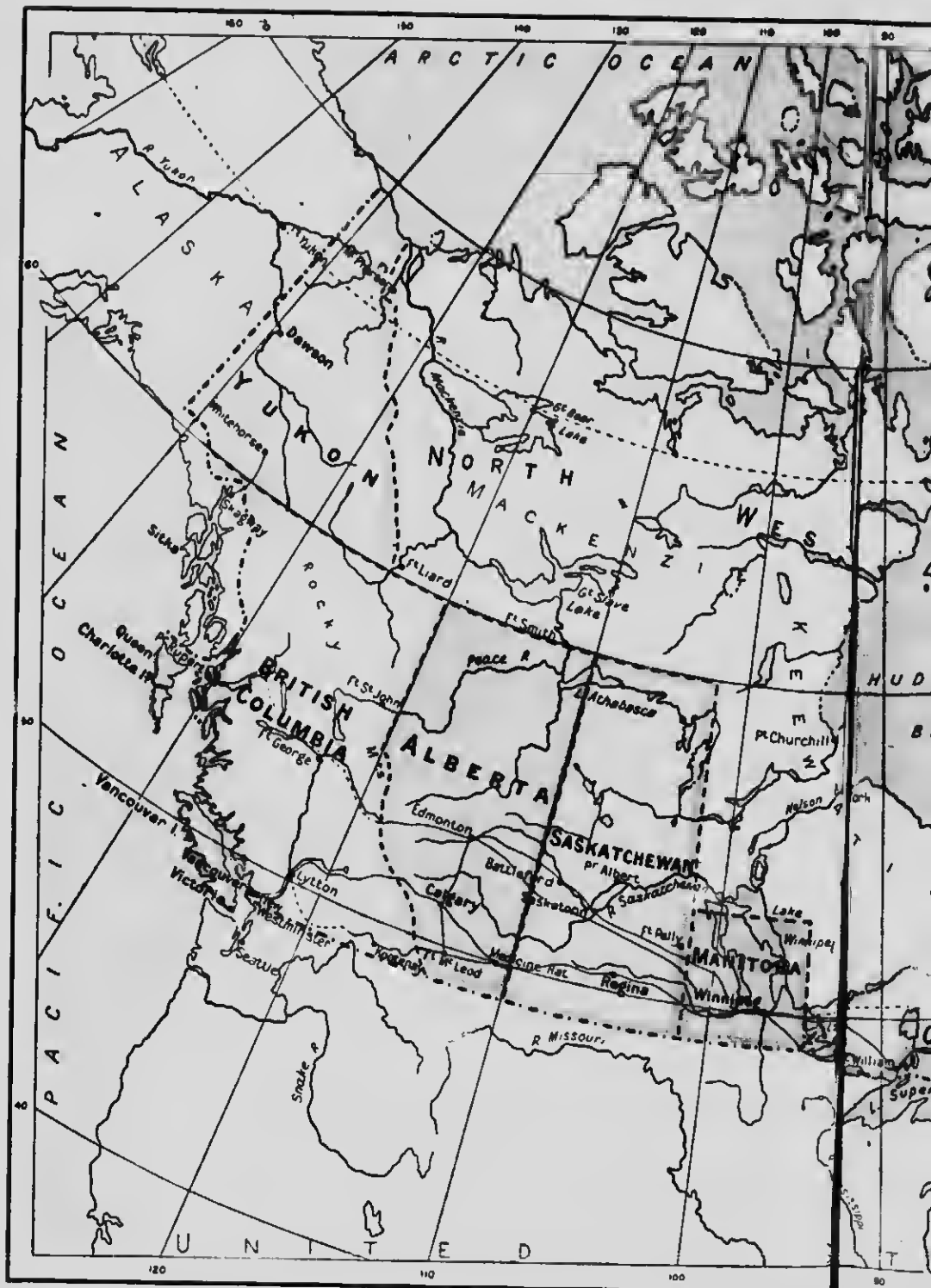
WE are now to make a journey through Canada from east to west, travelling at our leisure, and going where we will, whether we find railways to carry us or not. In this way we shall gain some useful knowledge of our home-land before setting out on the wider journeys over the world which we have in view.

As we make ready to start on this home survey, we notice at our front door, so to speak, an island which really forms part of Canada, although it is not yet part of the Dominion. This is the island of Newfoundland.

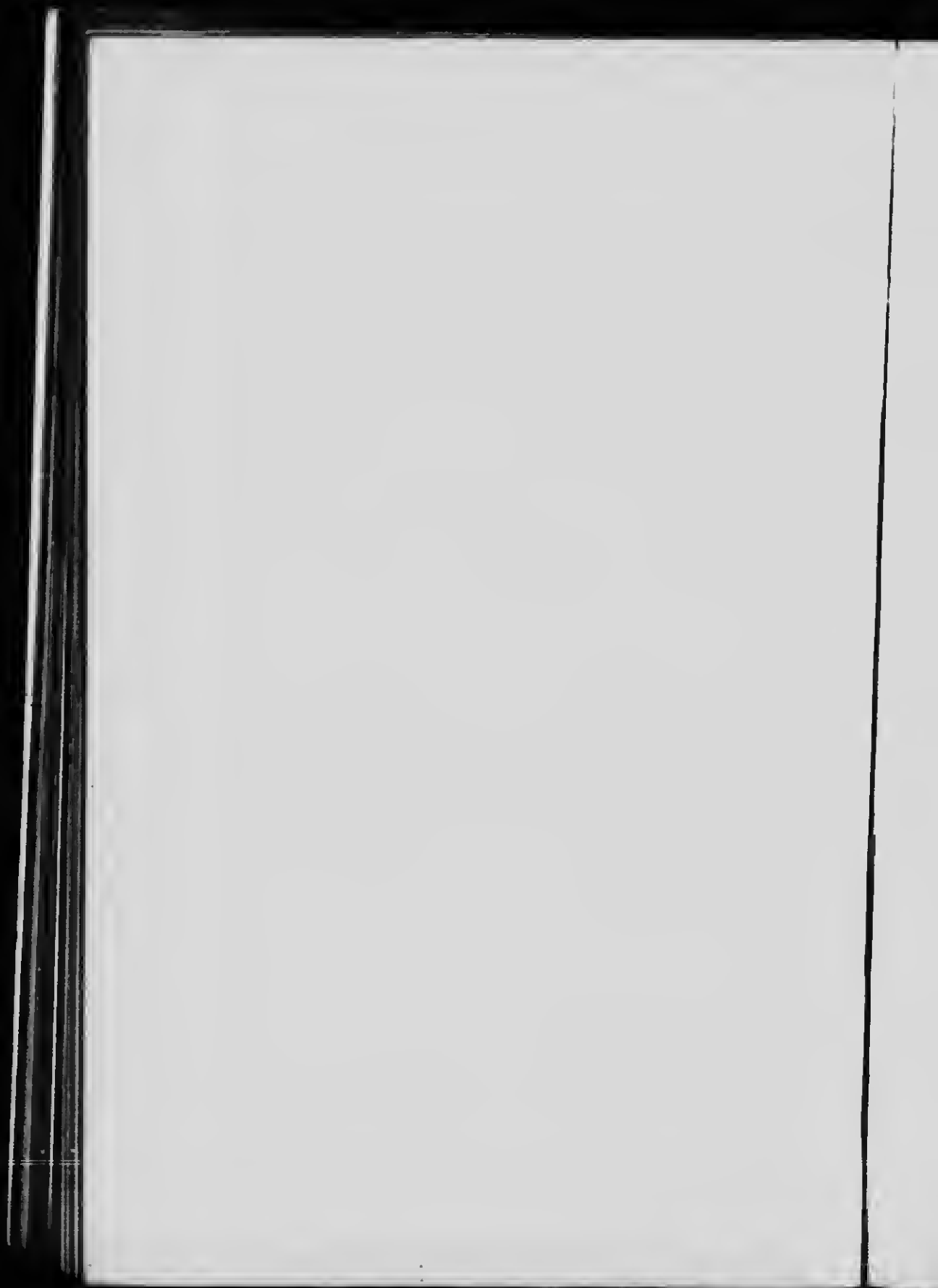
Though it stands outside the Dominion, Newfoundland is inside the Empire. It was indeed a British colony before Canada; it is the first of those lands beyond the British seas on which the British flag was raised—the English flag, we ought rather to say, for the colonization of Newfoundland goes back to the days when there was no United Kingdom, and when England and Scotland were separate and by no means friendly. The island was discovered by John Cabot, one of the early navigators, in 1497, and we are told that King Henry the Seventh of England paid “to him that found the new isle” the sum of ten pounds, or fifty dollars. Money was worth a great deal more in those days than it now is, but for all that we think the king was not over-liberal to the great sailor.

Newfoundland has been badly treated by those who have written about it. They have described its surface as “bog” and its climate as “fog,” as if there were no more to say. The Arctic current with its melting icebergs causes frequent fogs on the Atlantic coast during early summer, but even then there may be brilliant sunshine a few miles inland. As to its surface, there are marshes and muskegs, such as we find in many parts of Canada, but there are also wide stretches of fine agricultural land waiting for the farmer, and valuable forests, where now the woodman is at work and pulp-mills









are busy preparing the wood fibre for being made into paper.

The coast of Newfoundland is for the most part bold and rocky. It is much indented, and fine bays and fiords run deep into the land, making magnificent harbours. Most of the inhabitants live on the coast, and great tracts of the interior have not been fully explored. It may be called a sportsman's paradise, however. The innumerable lakes and streams provide splendid fishing. The "barrens" are the home of vast herds of caribou. The bear and the wolf may yet be found, and smaller game in abundance.

Underground there is much wealth awaiting the worker. Gold and copper are known to exist, and still more valuable stores of iron and coal, but as yet little has been done to make use of these. It is on the sea or near it that the Newfoundlander makes his living. Nine tenths of the exports from the island come from the sea.

In March and April the eastern shores are beset by ice-floes drifting down from the north, and these floes are the floating homes of thousands of seals at this season. Many steam and sailing vessels put out to sea with large crews on board, and the men land on the ice and capture great numbers of the young seals. The skins of the seals are made into leather and their fat into oil. When the sealing time is over, the schooners are made ready for the cod fishing. This is mostly carried out on the Grand Banks, as we have already seen. But the coast of Labrador is also a rich fishing-ground, and about one fourth of the whole yearly catch of cod now comes from Labrador.

The capital of the colony is St. John's, which stands at the head of a splendid land-locked harbour on the east of the peninsula of Avalon. As we approach it from the sea, we make for a narrow opening cleft in the rugged and lofty coast, which expands into a noble basin of water surrounded by hills. We see on the heights old fortifications dating from the time of the French wars, when St. John's was the headquarters of the British fleet. The chief street both for business and

fashion is Water Street, which runs along the sea front. Everywhere along the bay we notice industries connected with fishing—curing and drying of fish, rope and net making, glue and oil factories, and the like.

In the palmy days of Arctic whaling, St. John's was a busy place when the whalers were fitting out for their voyage, and when they returned with their cargoes of oil and whale-bone. This, however, is now a thing of the past. St. John's may yet, however, become a still more important seaport in the future, being the nearest port to the old country and the continent of Europe. Its distance from the coast of Ireland is only 1,670 miles, or less than half that from Liverpool to New York. A fast line of steamships could make this crossing within three days. An express train could carry passengers from St. John's to Port aux Basques in eight hours, and a steamboat would in a few hours more land them at some point on the mainland with railway communication to Quebec, Montreal, and Toronto. By such a route Montreal might be reached from London in five or six days.

Heart's Content, in Trinity Bay, is the landing-place of the telegraph cables which have their eastern end at Valencia Island on the coast of Ireland. Not only is this the shortest line across the Atlantic, but the floor of the Atlantic between Newfoundland and Ireland is one of the most level plains in the world. It has been said that if the water were drained off, one might drive a wagon all the way across. This provides a fine cable track, free from all sharp rocks and ridges which would strain and damage the outer sheathing of those great telegraph wires.



New Scotland

WE will begin our survey of the Dominion with the province of Nova Scotia. This lies on the south side of the Gulf of St. Lawrence, and is almost cut off from the mainland; the Bay of Fundy stretches northwards far into the land, and one of its arms, the Bay of Chignecto, reaches within twelve miles of the gulf. This narrow isthmus is taken as the land boundary line of the province; everywhere else it is bounded by sea.

The surface features of this peninsula are simple. It consists, for the most part, of a rocky plateau, facing the Atlantic with a bold coast line carved out into many inlets and fiord-like bays. The southward slope is dotted with lakes and broken by many small rivers. Along the north and facing the gulf is a range of hills, rising in parts to over 1,000 feet, on the slopes of which are some of the richest mining districts in the province and also some good agricultural land.

South of this ridge, spreading round the head of the Bay of Fundy, there are wide tracts of rich meadow land, lying so low that dikes are needed to keep out the tide. When the sluices in the dikes are opened and the muddy waters of the bay allowed to flow in, they leave behind them a load of silt which is all the fertilizer that is required to produce heavy crops of hay. Near the bay, from the Basin of Minas southward to Annapolis Basin, a fertile valley runs parallel to the coast. Here is the great fruit-growing district of Nova Scotia, from which apples are largely exported to England.

At the north-eastern extremity of the peninsula is Cape Breton Island, cut off from the peninsula by the narrow Strait of Canso, and itself almost cut in two by a lake-like fiord, the Bras d'Or. In the south this island contains rich farming land, and in the north it rises into bold peninsulas and headlands.

Let us enter Nova Scotia by its "front door," which is also a winter front door to the Dominion—the large and sheltered



HALIFAX.

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harbour of Halifax. When the gulf and the St. Lawrence ports are blocked by ice, this is one of the chief places of call for the Atlantic liners. Built on rising ground between its main harbour and the North-west Arm, the gay scene of many a yachting race, Halifax presents a long and busy water front, behind which frown the battlements of its citadel. The islands which guard the harbour are also fortified, and we feel that it is easier to gain entrance here as friends than it would be as enemies.

Before Canada undertook to guard her own house, Halifax was a station both for the British navy and for its army, and it boasts of splendid dock accommodation. Along the line of its wharves we may see merchant ships from far and near—from the ports of London, Liverpool, Glasgow, Havre, Boston, New York, and the West Indies.

As we travel inland from Halifax we see a rocky plateau stretching north and south; it is not heavily wooded, and seems better suited for the sportsman than for the farmer. Here in the season even the lordly moose may be hunted, while of smaller game and of fish there is no lack. As we cut across country towards the head of the Bay of Fundy, the landscape changes its appearance. We reach a land of smiling valleys and quiet streams, green meadows and orchards rich in blossom or in fruit according to the season. The Basin of Minas spreads like a lake on our right; beyond looms the lofty Cape Blomidon. The meadows in front of us are those of Grand Pré, the "great meadow." It is the Land of Evangeline.

Who was Evangeline? Canadian boys and girls need not be told; they all know her story, and we shall not repeat it here. But the name reminds us that in starting our survey of Canada with this province we have begun at the beginning of our history as well. Here in Acadia or Acadie, as it was called, the French people laid the foundation stone of their "New France."

Three hundred years have passed since De Monts sailed from Havre de Grace in France with a gallant company, on the

roll of which we read the names of Champlain, Pontgravé, and Poutrinecourt. Already the lower St. Lawrence had been partly explored, and some trade in furs established with the Indians. De Monts had now a charter from the King of France, giving him and his company sole rights of trade over Acadie, which was a vague title, covering the area of our Atlantic provinces and something more. From the French Bay, or Bay of Fundy, De Monts spied the entrance to Annapolis Basin, and there he founded the settlement of Port Royal, now Annapolis.

But the settlement soon fell on evil times. Acadie was neglected by the French, and raided by English colonists from Virginia. It was claimed by the British, and was granted by the British king to a Scottish nobleman under the name of "New Scotland." The charter was, of course, written in Latin, and in it the country was called "Nova Scotia," the Latin for "New Scotland," and this Latin name it has kept to the present day. During the wars between Britain and France this province was tossed like a shuttlecock from one side to the other, being now French and now British. Its possession was of importance; Cape Breton Island was the chief key to the gulf. At the peace of 1713 Nova Scotia finally became British, but Cape Breton remained French.

The French settlers, however, persuaded by their kinsfolk in "Canada," or Quebec, refused to take the oath of allegiance to Britain, hoping that some change in the fortunes of war or politics would yet restore the province to France. The English colonists in New England and elsewhere urged the government to take strong measures, and it ended in the Acadians being expelled from their homes by the troops under the command of Colonel Winslow of Massachusetts. Had they only waited five years longer, till Quebec was captured, there would have been no danger from the Acadian peasants, and their descendants might still be living there in peace.

The story of their expulsion, as told by the poet Longfellow, though founded on fact, is not true to history, but it is so beautifully told that we may forgive the poet's errors as we

New Scotland

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visit the land of Evangeline and trace the various places mentioned in the poem. We may yet look upon old trees which, if not themselves planted by Evangeline's folk, must at least be the descendants of those that were.

By taking the railway south to Digby we can see the whole rich Annapolis Valley with its apple orchards, where but few acres are needed to support a family in comfort. The farmers will tell us that here they grow the finest apples in Canada—that is to say, in the world. But we shall be



APPLE ORCHARD, NOVA SCOTIA.

told the same story in every fruit-growing district of all the other provinces; each of them claims that it produces the finest apples in the world, so we must keep an open mind on this question. But we agree with the Nova Scotian farmer that a fine ripe Gravenstein is a fruit worthy of all the praise he can give it.

In order to see the busy northern counties of the province we shall journey northwards from Halifax by the Inter-colonial Railway. We pass the rich meadow-land near Truro, and come out on a hilly stretch near the gulf. Here we see many thriving farms, and if we listen to the speech of some of

the older folks we may fail to understand it. For here the people are of Scottish descent, and they still preserve the Gaelic speech of the Old Scotland amid the valleys of the New. Rich coal and iron mines are here, and New Glasgow is following after old Glasgow in its mining industry.

We must cross the ferry to Cape Breton before we can see Nova Scotia's busiest city. The train is run bodily on to the deck of a steamer, and the mile and a half of water is quickly crossed. We then pass along the western side of the beautiful Bras d'Or for a time, but are again ferried over a narrow



IRON FOUNDRIES, SYDNEY.

strait to the east side, along which we run till near Sydney. Glace Bay is the principal centre of the coal mines and steel works. Here we see tall chimneys, coal mines, iron foundries, and all the signs of an active and growing industry in mining and metal work. It is fast becoming the "black country" of Eastern Canada. Sydney, divided into a North and South city by its fine harbour, is growing rapidly in size and in wealth, and we may even hear one of its citizens speak of Halifax as a "relic of the past."

At Glace Bay we notice some very tall steel towers of which we cannot guess the use. On making inquiries we find that

these are used for sending and receiving messages by what we call wireless telegraphy. There are similar towers some two thousand miles away at Poldhu in Cornwall, England, and electrical apparatus is now made strong enough to send electric waves all this distance through the air. The chief use of these stations, however, is to communicate with ships at sea which are fitted with "wireless" apparatus.

Before we leave this district we may find time to visit Louisburg, and see the ruins of that old fort which was built by the French after Nova Scotia was handed over to Britain,



RUINS AT LOUISBURG.

but was captured by James Wolfe shortly before his victory at Quebec. Little remains except a broken wall to mark the place of what was deemed an impregnable fortress.

We have now seen the chief parts of the province—its rich farming and orchard land, its woods, where lumbering is largely carried on, its mining of coal and iron, and its great foundries and steel works. There are other mines than those we have visited; in the hard quartz rocks of the Atlantic coast some gold is found. But we have not yet mentioned one of the most important industries of Nova Scotia—its fisheries. Nova Scotia is well situated for fishing of various kinds. Like Newfoundland, it is near the great feeding grounds of the

cod and other natives of the deep sea. Halibut, haddock, herring, mackerel, and salmon are also caught in great abundance. On the rocky shores of the Bay of Fundy many people are engaged in lobster fishing—or perhaps we should say trapping, for the lobster is not a fish. More than sixteen hundred boats are engaged in this fishery alone. A considerable quantity of the catch finds its way to the markets of Boston and other cities in the United States, and lobster canning is also carried on. Yarmouth, a busy port in the south, is the chief centre of the fishing industries of the province.

We already know something of the history of this province, and so we are not surprised to find that its inhabitants are of different races, and in certain parts still speak different languages. Many descendants of the original French colonists yet remain, and speak the tongue of their ancestors. After the English occupation a number of German settlers were brought over, and at Lunenburg there is a district which is still largely German. In the northern counties and Cape Breton the people are mostly of Scottish descent, and keep up the speech of their Highland mountains and glens. The great majority of the inhabitants, however, are English-speaking if not English in race, and a large number of these came not from the old country direct but from the United States. They were United Empire Loyalists, of whom we shall have something to say later on, and their coming gave a great increase of strength to the province at a time when this was much needed.

New Brunswick

THE larger part of ancient Acadie remains to be visited—the part which now forms the province of New Brunswick. New Brunswick has a sea boundary on three sides—the Bay of Fundy on the south, the Gulf of St. Lawrence on the east, and the long Bay of Chaleur on the north. Part of its northern boundary is the province of Quebec and its western

is the state of Maine. The surface is lully rather than mountainous, and includes several river-valleys of great fertility. The St. John valley occupies most of the south-west, and the Miramichi and Restigouche valleys the north-east.

When we leave Halifax on our visit to New Brunswick, the railway carries us northwards over the plateau, and then strikes across the meadows of Cobequid Bay, where we halt at the pleasant town of Truro. After rounding the head of the bay we find the Cobequid Mountains on our right. The hills become higher and the valleys deeper, and at Londonderry we reach a very picturesque country. Soon the ridge is crossed and we reach more level ground, and just beyond Amherst we cross the provincial boundary into New Brunswick. At this point the distance between the gulf and Chignecto Bay is only twelve miles. A short run brings us to the busy town of Moncton, which seems to us to have a very large railway station for the size of the town. Moncton is an important railway centre, being the headquarters of the Intercolonial Railway. It has great workshops for construction and repair work, and a large number of men are employed in them.

Moncton is also an important railway junction. From this point we can continue our journey northwards by the Intercolonial, the line keeping parallel to the gulf shore but at some distance from it. This route carries us past some of the best lumbering districts of the province. We cross the Miramichi River above the town of Newcastle; in this valley lie great areas of timber which are only being explored as yet by the woodman.

Chatham is on the opposite side of the river from Newcastle and a few miles lower down. Both towns have a large trade in lumber, as we can see from their rafts of logs and their saw-mills, and Chatham also manufactures wood-pulp for paper. This is a favourite centre for sport and fishing. The south branch of the Miramichi is a famous salmon river, and the whole forest region is rich in game, including moose, caribou, and bear. The Miramichi was the scene of a disastrous forest fire in the year 1825, which

is still spoken of in the district. It is said that some three million acres of forest were destroyed, and nearly two hundred persons lost their lives.

After leaving Newcastle we are carried still northwards through a forest district with but few inhabitants till we reach the estuary of the Restigouche, at the head of Chaleur Bay. Here we may stop at the little town of Dalhousie, one of the most popular sea-shore resorts in the province. Its sheltered harbour invites us to boating, and we may enjoy bathing on its smooth beach, where the water never feels too cold. Here



SALMON FISHING ON THE RESTIGGUCHE.

the tides will not trouble us by their height, as might happen on the shores of the Bay of Fundy. There are many pleasant walks and drives on the higher ground, and lovely views from the hill-tops.

The Restigouche River is famous for its salmon fishing, and many visitors, from Canada and the United States, pay a large sum for the right to fish in it. It has been calculated that each salmon caught costs the visitor about twenty-five dollars, by the time he has paid his boatman, guides, keepers, and other expenses as well as the cost of his living. But the sportsman pays for his pleasure and the benefit to his health rather than for what he catches, and no doubt he considers the money well spent.

Chaleur Bay was one of the places visited by Jacques Cartier on his famous voyage in 1535, and as it was then the height of summer he called it "Baie des Chaleurs." The Indian name for it is perhaps still more descriptive, for it means the "Sea of Fish." Fishing is still profitably carried on, and there is a considerable export of canned salmon and lobsters in the neighbourhood.

Let us now return to Moncton and travel by the other great railway line, which bends towards the south. For some time our route lies beside the Petitcodiac River, and we then pass



ST. JOHN.

to the valley of the Kennebecasis, which flows into the St. John River, forming a wide estuary just above the city of St. John. This valley contains much fine agricultural land. We pass fields of wheat, oats, and barley, which yield very heavy crops. Root crops, such as turnips and carrots, as well as potatoes, are much cultivated. The mention of root crops suggests cattle, for these crops are raised not for export but for use on the farm. We see many fine herds of cattle on the meadow pastures, and we learn that dairy farming is one of the most prosperous industries of the province. At the town of Sussex, which we pass on our way, there is a government school for teaching the farmers how to make the best of their dairies. Cattle are also raised for export.

Before we reach St. John the country becomes more rocky and picturesque, and the river widens out into Kennebecasis Bay, on the shores of which are some favourite resorts of the people of the city. The waters of the St. John River enter the Bay of Fundy, after passing through a ridge of rocky ground, in a crooked S-shaped course. At the upper bend is the narrow gorge with the reversing falls of which we have already spoken; the lower bend broadens out into the harbour. The city was originally built on the high bluff to the east of the harbour, but has now spread to both sides of the river.

St. John has a history of which it may well be proud. Of it we may say that it was a city born in a day. From a mere outpost of trade it suddenly became a city of five thousand inhabitants, founded by a body of United Empire Loyalists in the year 1783. In that year some 10,000 of these honoured immigrants arrived from the United States, and it was they who made St. John a city and New Brunswick a province.

When the war of American Independence, as it is called, began, many of the British colonists in the States were loyal to their flag. As the war went on some were forced to join the rebellion for the sake of their own safety. But in spite of Britain's losing the command of the sea, and thus failing to subdue the revolt, there were large numbers who held fast to their loyalty.

When the United States then formed themselves into a nation, these loyalists found themselves without a home. Forgetful of the customs of civilized warfare, their neighbours drove them out, and a stream of loyal British subjects began to pour into Canada. The hardships of their journeyings are a matter of history, but the result of that immigration was all for good to our country. These United Empire Loyalists, as they were called, were men and women of the highest type, well educated, and of a noble strength of character, and many of their names are written on the pages of our country's history.

With such a beginning, we are not surprised to find that St. John is one of our most prosperous cities. Its fine harbour places it second only to Halifax as an Atlantic winter port.

Before the days of iron and steel ships, the wooden "clippers" built here were famous all over the world; and its export trade, of which lumber forms a great part, is second only to that of Montreal. It is the eastern terminus of the Canadian Pacific Railway System, the railway wharf being on the west side of the harbour.

St. John received its charter, constituting it a city, in 1785, and is thus the oldest chartered city in Canada. It was also the capital of the new province until, a year later, Fredericton was chosen as the seat of government. This was



TIMBER RAFTS.

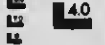
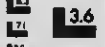
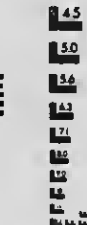
done partly because it seemed less open to attack than the seaport town, and partly in order to encourage settlement in the interior of the province. A large number of French settlers had made their homes in that neighbourhood before it became a British colony.

A pleasant river journey of six or seven hours will bring us from St. John to Fredericton. We board our steamer above the reversing falls, and steam northwards. The banks are high and rocky at first, but the river soon widens out into a lake-like estuary, known as Grand Bay, with Kennebecasis Bay opening out on the right. Soon we pass into a narrower



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part, Long Reach, with a fine view of the river for miles in front, between hills which rise to three or four hundred feet. It varies in width from one to three miles, and is dotted with river craft and with log rafts, many of them being towed down stream by little puffing steam tugs. We pass many wooded islands and a number of pretty little towns.

The hills disappear, and a level and fertile stretch follows. There are rich meadows and dairy farms round Grand Lake, on our right, and here also we see signs of coal-mining. By-and-by the river narrows, and we find ourselves in the midst of a busy lumbering industry. Logs are everywhere, being



FREDERICTON.

floated down and made up into rafts for their journey to the saw-mills of St. John.

Now we notice before us on the left a hill crowned by a large building; this, we are told, is the University of Fredericton. Then on the right we see the spires of the Cathedral and the dome of the Parliament Building. At last the city itself comes into view, and our steamer passes the railway bridge and moors at a quay on the river-side.

Fredericton we find to be a much smaller place than St. John, but we enjoy its shady trees and green lawn. The public buildings are spacious and solid-looking, as becomes the capital of the province. We are surprised to find so large

vessels moored here, but the river is deep enough up to this point for ocean-going craft. Smaller vessels can go as far as Grand Falls, some two hundred miles from the sea.

We have not time to explore the province further, and to save time we return to St John by rail. The track runs mostly through wooded country, and the journey is less interesting than that by river, but it occupies only about two hours. Then we start once more for Moncton, on our way to Prince Edward Island.

Prince Edward Island

WE have the choice of two routes to reach Prince Edward Island, the "Garden of the Gulf," either from Pictou to Charlottetown or from Point du Chene to Summerside. The steamers on both routes are good, but the latter route will suit us best. When heavy ice in Northumberland Strait prevents the steamers from crossing, strong rowing-boats are used, which are made with two keels, so that they can be dragged over the ice like a sledge, and rowed where there is open water. In this way the mails are carried across the narrowest part of the strait, only nine miles in width.

As we approach the island we are struck with the red colour of the sand and rocks on the shore, while the green of the meadows and trees seems all the brighter by contrast. The rock of which the island is made is red sandstone, and the fertile soil which covers it is everywhere reddish in colour. The scenery is very pleasant and restful to the eye; the surface is either level or gently sloping, and the hills do not rise above five hundred feet.

Although there are no large towns, Prince Edward Island is the most thickly inhabited province of the Dominion. More than half of its area is cultivated, and the farms support a large population. As we travel along the island by the narrow-gauge railway which runs from one end to the other, we see

that it is not a wheat-growing country; mixed farming is the most common type. The fine herds of cattle in the fields show that the farmers take care to breed of the best, and the same is true of the horses. Here and there we may be shown some noble animal which has won prizes not only in his own province but at fairs in other parts of the Dominion. Dairy farming is common; the rich green meadow pastures and the heavy crops of roots and fodder make this a profitable business. Potatoes grow very well in the red sandy loam, and the farmers export a large quantity of these and of oats. There are few manufactures; the province is almost entirely agricultural. Fruit grows well; fine apples, pears, and plums are produced, and grapes ripen in the more favoured localities.

We find in the many sheltered bays a large number of fishing-boats. These are small, for the fish are found quite near the coast, and most of the boats are employed in the oyster fishery. The flat tidal estuaries of the rivers make splendid feeding ground for oysters, and the fishery is carried on during more than half the year. The Malpéque oysters are well known not only on our side of the Atlantic but even as far afield as Paris.

From our landing wharf at the busy little port of Summerside we have a run of some fifty miles through this pleasant land of farms and gardens, and then reach the provincial capital, Charlottetown. It stands on a gentle slope, where the mouths of three rivers unite to form a safe and spacious harbour. The town has wide airy streets and open squares, with shady trees and cool green turf. In the main streets buildings of stone are now replacing the wooden houses of former days. The Provincial Building, the seat of government of the province, stands in the principal square, and from its dome we obtain a splendid view of the town and its surroundings.

We may recall one interesting fact about Charlottetown. It was here, in 1864, that Canadian statesmen met in conference and discussed a scheme for joining the separate provinces of Canada into one Dominion. Later in the same

year the conference was resumed in Quebec, where the scheme was finally adjusted.

There are many beautiful summer resorts on the coasts of Prince Edward Island; Rustico, on the north shore, is the best known. These are favourite centres for bathing, as the water of the gulf is much warmer in summer than that of the open ocean, and the sheltered bays afford plenty of scope for boating and fishing.

The island formed part of the original French province of



CHARLOTTETOWN.

Acadie, and some of the people are descendants of French exiles from Nova Scotia. Many are of Scottish descent. More than a century ago a large party of Scottish immigrants were settled here by the Earl of Selkirk. They had been forced to leave their homes in Scotland, some because of hard times there, and others because the Highland landlords wished to turn into sheep farms the valleys where these men had been tenants. We shall hear of this earl again in our travels, as he brought over other companies of Scots and settled them on the prairies at the Red River, where the province of Manitoba afterwards sprang up.

Quebec

WE have completed our round of visits in Acadie, the old French maritime province, and must now make our way to the greater French province of Canada. We have read in our history books how the ships of Cartier first sailed up the gulf, and claimed for the French king all they saw, and as much more as they might discover; and how next year Cartier pushed up the river as far as the Indian town of Hochelaga, and returned to spend the winter at Stadacona. But the French king gave little heed to the New France which was being offered him. French traders came to buy furs from the Indians, and French seamen came to fish on the coast, but no one came to settle and make a home in the new land. Then, after seventy years had passed, the town of Port Royal was founded in Acadie, and four years later, in 1608, Champlain landed the first European settlers at Stadacona or Quebec.

We cannot tell here the story of the province; our business is to see what it is like to-day, after three centuries of the white man's rule, first taking a bird's-eye view of the whole province, with the help of the map, and then making excursions from one part to another for the purpose of finding out all we can about its people and their work. Quebec, we must remember, does not contain the whole of the French province of Canada, but only that part of it which between 1791 and 1867 was known as Lower Canada.

We see by the map that Quebec is a very large province, and it will probably be still larger before long, for when the boundaries of this province and of Ontario and Manitoba are settled it is probable that the whole of the Labrador Peninsula, except the strip of coast facing the Atlantic Ocean, will be included in the Province of Quebec. But this part of the North-West Territory, even if it were already included in the province, need not detain us long; it is not yet the home of many of our race, nor is it likely ever to be settled by them. In fact, we do not know much about this district as yet,

and great tracts of it have not been fully explored. The northern part of the peninsula, bordered by Hudson Strait and Hudson Bay, lies beyond the natural forest belt of the continent, and forms part of the "barrens" or tundra. The only inhabitants are scattered tribes of Eskimos, who find their living on the sea rather than on the land. The Atlantic coast of Labrador, as we have said, belongs to Newfoundland, and along its rugged front of capes and inlets a large number of fishing stations are occupied during the summer. Inland, the surface is an irregular rocky plateau, with many rivers, lakes, and swamps, most of which drain towards Hudson Bay and James Bay.

About half way between James Bay and the St. Lawrence the plateau reaches its greatest height in the long Laurentian ridge which runs parallel to the river. The south slope of this ridge, as well as the part of the province which lies south of the St. Lawrence, are heavily timbered, and in the lower parts there is much fertile soil. It is here that the early settlers made their homes, and the cultivated parts of the province are for the most part near the St. Lawrence, or in the valleys of its larger tributaries. The important part of Quebec province, therefore, is the low ground on either side of the St. Lawrence, between the Laurentian Highlands on the north and the ridge of high ground on the south which extends from the eastern townships to the Gaspé Peninsula. It is this part of the province which we are now to visit in a few rapid excursions.

We have first to get back to the Intercolonial Railway, joining the regular train from Halifax to Quebec. As far as the Restigouche River we are passing over familiar ground, but on leaving Campbellton and crossing that stream we find ourselves in Quebec province. We also find that our watch is an hour fast, and we must put it back from Atlantic to Eastern Standard time. For the three hundred miles of our journey we are passing through a country where the common language is French.

At first our route lies up the Matapedia Valley, and we cut across the isthmus of the bold and rocky Gaspé Peninsula.

Soon we pass the height of land and run downhill towards the St. Lawrence. We then turn to the left along its southern shore, and stop at the little river-port of Rimouski, with its long pier stretching out into the river. Here the incoming ocean steamers stop to load mails, to be hurried on to Quebec and beyond it by train. Outward-bound steamers drop their pilot and send back their last mail at Father Point, a few miles below Rimouski.

For the rest of the way we are running parallel to the river, and sometimes quite close to its shore. The whole slope from the Notre Dame Mountains to the St. Lawrence is spread out before us. At times we pass through heavy timber; on the bank of some stream we may see a busy saw-mill at work in the forest, and the log huts of the men round about it. The stream is covered with floating logs; piles of freshly cut lumber show bright against the dark green foliage of the trees, and the air is full of the odour of pine wood.

Now it is a broad expanse of cultivated land, divided into long narrow strips, running from the river bank on our right up to the wooded hills on our left, and we know at a glance that this is a French settlement. English settlers like to have their farm in a compact square, with their house planted somewhere in the middle, as if to keep their neighbours at arm's length. The French plan looks much more social and friendly. A good road runs across the settlement, midway between the river and the forest, and along the side of this road all the houses are built. Some of the farm strips are so narrow that the farm buildings run right across them, and are almost joined to the houses of the farms on either side. So the houses of the settlement look like a long village street, extending for perhaps two or three miles. In the middle rises the parish church, its tall wooden spire covered with sheets of shining metal—a prominent object in every French settlement. The plan of building all the houses near one another strikes us as being a good one for the boys and girls, who are sure of finding companions near at hand.

As we near the city of Quebec the river becomes narrower,

and a large island, the Isle of Orleans, lies in the middle of the stream. The banks on either side become more lofty, and beyond the island, on the northern shore, we see a great waterfall pouring down over the cliff into the river. This is the Falls of Montmorency. In a few minutes more we stop at Levis.

The City of Levis, or Point Levis, stands opposite Quebec, and it was here that Wolfe posted the heavy cannon which did so much damage to that city during the siege. The view of Quebec from the heights is very fine, and with a map of the place before us we can follow easily the story of the siege and capture of that strong fortress, and can understand clearly the task which the British leader had to face ere New France became part of Greater Britain. Levis is now a busy river-port, with large docks and much trade.

The city of Quebec deserves a longer visit than we can afford. No city in the Dominion has so romantic an appearance or so varied a history. It stands on a lofty triangular point between the St. Lawrence and the St. Charles Rivers, with the elevated Plains of Abraham on its third or landward side. The lower town fringes the river shores, built on a narrow level strip beneath the cliffs, and here most of the business and commerce of the city has its centre. The old town was defended by strong walls in addition to its natural fortification of cliffs, and in walking round these walls we enjoy a splendid view of the city and its suburbs.

Quebec has long since grown beyond the limits of its walls, not only on the busy river fronts, but up on the plateau, where the massive block of the Parliament Building stands prominent. A little way to the west a tall pillar marks the place of Wolfe's death on the battle-field, which has now been formed into a national park. On the highest point, overlooking the river, stands the citadel, and from that we obtain the finest view of Quebec, which is also one of the finest views in the world.

Far down below, where the rivers join, we see modern Quebec at work. Here are lines of wharves, where cargoes of



VIEWS IN QUEBEC.

1. Dufferin Terrace. 2. Quebec from Levis. 3. Wolfe's Monument and Plains of Abraham. 4. An old French Street. 5. Montmorency Falls. 6. Church of Notre Dame des Victoires. 7. Parliament Buildings. 8. French Cathedral.

timber and grain and dairy produce are being loaded. At the farthest point may be lying one or more of the great Atlantic steamships, beside the long range of buildings which the government has erected for the reception of immigrants—a busy and interesting place during the summer season.

Beyond the St. Charles River, the fertile and well-cultivated slope on the north bank of the Lawrence spreads out before us like a map. We note the long narrow farms, and the continuous line of houses running across them, here forming



TADOUSSAC.

quite a town, for the land is thickly settled. Beyond is the Montmorency River, with the spray hanging over its lofty falls. These falls are less in volume than they once were, however, for part of their water is used in turbines to produce electric power for the city of Quebec. There is no coal in the province, but the rapid streams flowing from the Laurentian Mountains give abundance of water-power for factories and other purposes.

If we wish to see the part of the province which lies to the north of the river we may take steamer down the St. Lawrence

(1,580)

to Tadoussac, and sail up the Saguenay to Chicoutimi. We can then go by rail up the Saguenay valley to Lake St. John, and return to Quebec by the St. John Railway. We shall thus see some typical Quebec landscapes—agricultural, lumbering, and hunting. On our left as we sail down the St. Lawrence the shore rises boldly, for here the Laurentian Mountains are close to the river. We pass many pretty riverside villages, which are becoming favourite summer resorts.

Tadoussac is the end of our St. Lawrence trip. It stands at the mouth of the Saguenay; it was an old trading station of the French fur-traders before Quebec was founded, and fishermen came up from the gulf in pursuit of a small kind of whale which is still found in the river. It has a beautiful situation, and is sheltered by the hills which rise steeply behind. If time permitted we might learn much of early Canadian history here, and find many traces of the time of French settlement and rule.

We now turn westwards up the Saguenay River. It seems a river without a valley, for its bed is simply a vast rocky gorge cleft through the mountains and running in almost a straight line for some sixty miles inland. The lower Saguenay is, indeed, rather a fiord than a true river, and its waters rise and fall with the tide. As we leave Tadoussac, the cliffs rise on either hand to a height of from six to twelve hundred feet. After sailing some thirty miles we reach the most sublime and gloomy scenery on the route: on our left opens out a small bay overshadowed by two capes rising in dark and threatening cliffs to a height of more than fifteen hundred feet—Cape Eternity and Cape Trinity.

After we have passed those wonderful cliffs the shores become less steep and lofty, and shortly we find ourselves in the true valley of the Saguenay, and in the midst of a very busy lumbering district. Here, at the head of the fiord, where the Saguenay River enters the tidal water, stands the town of Chicoutimi. It has pulp-mills, which send large quantities of wood-pulp over to Europe. Chicoutimi is well placed for this industry, standing as it does in the midst of a vast forest

region, with abundance of streams to float down the logs, and of water-power to drive its mills.

We next proceed by rail up the valley to Lake St. John. If we had been making this tour in the opposite direction, we might have had the pleasure of descending the river in canoes with Indian guides, and shooting rapids to our hearts' content. Lake St. John is best known to those who are bent on fishing and hunting. In its valley there is, however, a wide stretch of good farming land, with a clay soil on which oats, potatoes, and wheat grow well. Good cattle are also reared, and cheese and butter are made and exported. This part of Quebec has a less severe climate than we might suppose from its position, and the snowfall is less than in the St. Lawrence valley to the south.

The lake is a famous fishing centre, the favourite fish with sportsmen being the ouananiche, a kind of freshwater salmon, which is found only in this district. The little town of Roberval draws many visitors in summer, when its people find employment as boatmen and guides to those who come here to fish, or to camp out by the many beautiful streams which fall into the lake. It is also a hunting centre, as caribou are found in considerable numbers towards the north. Lumbering is, however, the chief industry of the town.

From Roberval we take train back to Quebec city. The line runs almost due south. After leaving the lake valley we pass through a somewhat thinly wooded and rocky country, with rivers and lakes innumerable. This is a very popular fishing country. Near many of the railway stations, club houses have been built by city men who are fond of country sports, and who find a few days' fishing in this wilderness a splendid rest from the strain and worry of business.

On this part of our circular tour we travel within a few miles of the great Laurentides National Park. This park is a reserved area of more than 2,500 square miles which the Quebec government has set apart as a protected hunting ground. The woods are full of game, including caribou and moose, and sportsmen may hunt there under proper regulations for a

certain fee. In this way there is no danger of those fine wild animals being killed out as they have been in many other parts of Canada.

Shortly before reaching Quebec we pass the Indian village of Lorette, where a few hundreds of the Huron Indians, the original inhabitants, still live. They are now Christians and live in a civilized manner, but they still carry on some of their old occupations as hunters and trappers or guides, and they make and sell such articles as snow-shoes, moccasins, toboggans, baskets, and bead-work.

We must now survey rapidly the upper part of the province, lying towards Montreal. To the south of the St. Lawrence the international boundary sweeps back from the river for a hundred miles, leaving a wide tract of well-watered and heavily wooded land. Part of this has long been cleared and settled, and the Eastern Townships, as the district is called, is one of the busiest and wealthiest parts of the province. Here many of the people are English-speaking, and we see proofs of their enterprise both in their busy towns and in their thriving farms, on many of which we may notice herds of cattle of a very fine type. A glance at a railway map is enough to show us the importance of this part of Quebec, for there is quite a network of railway lines joining its cities and towns.

The north shore of the river is more sparsely settled, but here too we find pleasant stretches of farm land in the river valleys, and tidy French villages and towns dotted over the landscape. There is of course a wide extent of forest land to the north where man has not yet attempted to make a home, and many of the farms where homes have been made are still only partly cleared of their natural crop of timber.

The sail up the river from Quebec to Montreal will give us a good view of this part of the province. We draw out from the wharf beneath the shadow of the citadel, and soon pass the notch in the cliff where Wolfe's Highlanders climbed up in the dark to gain a footing on the plain above. Then we see the place where a great railway bridge is being built across the river.

The view from the deck of our steamer shows us typical Canadian scenes. Rich pastures and cleared farm-lands alternate with stretches of mixed wood; bright little towns and villages stand here and there along the banks, especially where some tributary stream opens a way into the plain on either side; and further back the dark lines of forest-clad hills close in the view. Shipping of varied types enlivens the broad river—small fussy steamboats, slow barges laden with timber, rafts floating down the side-streams, large and lively passenger steamboats, and at times a huge ocean liner ploughing its way to or from Montreal.

About half way between the two cities we see on the north bank the roofs and spires of a considerable city, fringed with masts and funnels along the water front. This is Three Rivers, one of the notable old French towns of Canada, and now one of its busiest river-ports. Three Rivers stands at the head of the tidal portion of the St. Lawrence, and at the mouth of one of its great tributaries, the St. Maurice, a river some three hundred miles long, whose wide valley runs far back to the height of land between us and James Bay. Three Rivers is the natural outlet of a great lumbering area to the north. It has also a considerable manufacturing industry, including metal manufactures, for the neighbourhood yields a supply of iron ore. Its cathedral and its educational institutions remind us of its importance in the days of French rule, and we should find its history of some interest if we had time to study it.

Above Three Rivers the St. Lawrence spreads out into a wide shallow lake, Lake St. Peter, and the course for shipping is carefully dredged and marked out by buoys. As the river narrows again and we see the banks closer at hand, we notice how well cultivated and rich the plains appear. On our left we pass the scene of one of the most romantic tales of Canadian history—the defence of her home by Madeleine de Verchères against the Iroquois Indians.

Soon we see before us the city of Montreal, with its elevators and its forests of masts and funnels near the river, then its

wide expanse of roofs and spires and domes, and behind all the tree-clad slope of its "mountain," which gives a special character to the scene, and helps to make the busy city a beautiful one. Here our steamer must stop, for just beyond are the first rapids on the St. Lawrence, and here accordingly we shall end our survey of the province.

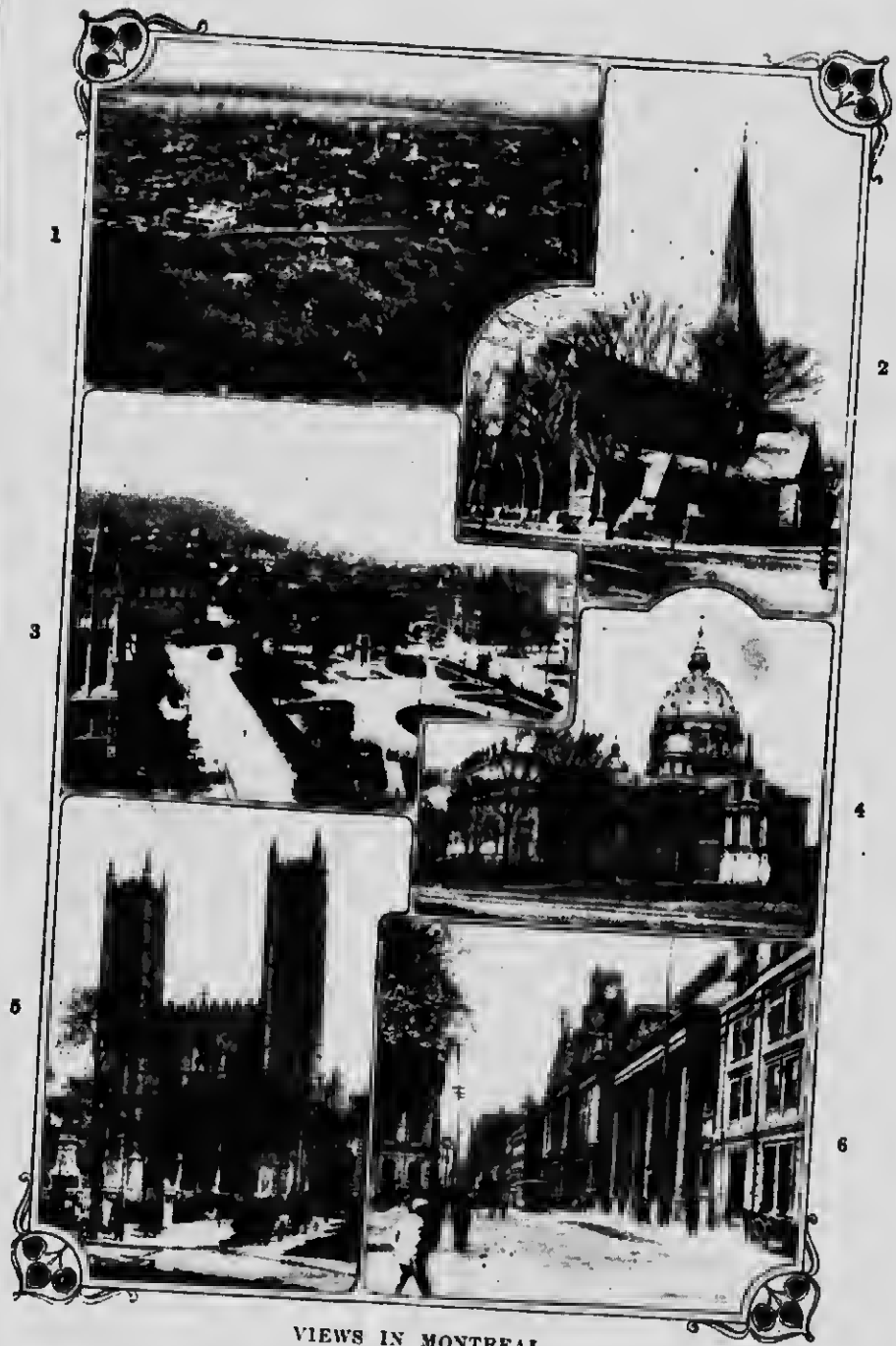
Montreal we soon find to be Canada on a small scale; it can show us samples of whatever the Dominion contains. Standing at the border-line where the older French Canada joins the newer British Canada, its population is almost equally divided between the two races; the French are somewhat the more numerous, but the English-speaking part have most of the business and commerce in their hands.

Though standing so far inland, Montreal is our chief sea-port. Large ocean steamers lie at the wharves discharging cargoes which must here be transferred either to the railway or to vessels which can pass through our canal and river systems. It exports our national products of every kind—the wheat of the centre and west, the furs of the far north, and the dairy produce and fruit of our rich southern districts. It has a large manufacturing population engaged in work of varied kinds. Some of its streets remind us of the narrow picturesque streets of Quebec, but there are others whose straight lines and ample width show that they have been laid out in recent times.

The best way to see the city of Montreal is to take the mountain elevator up the steep slope to Mount Royal Park. From this magnificent outlook point we see spread out before us like a map a wide stretch of streets and houses, parks and gardens, and beyond it the silver streak of the St. Lawrence, with a somewhat smoky fringe of busy wharves, railway lines, and factories. On the farther side of the river a rich cultivated plain extends away to the dim horizon.

There are so many spires, towers, and domes rising above the houses that Montreal looks like a city of churches. There are three cathedrals in the city, besides numerous other churches, as well as convents and other ecclesiastical buildings. This is very natural when we think of the early history of

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VIEWS IN MONTREAL.

1. View from Mount Royal. 2. Christ Church Cathedral. 3. Dominion Square.
4. St. James's Cathedral. 5. Notre Dame Cathedral. 6. St. James Street.

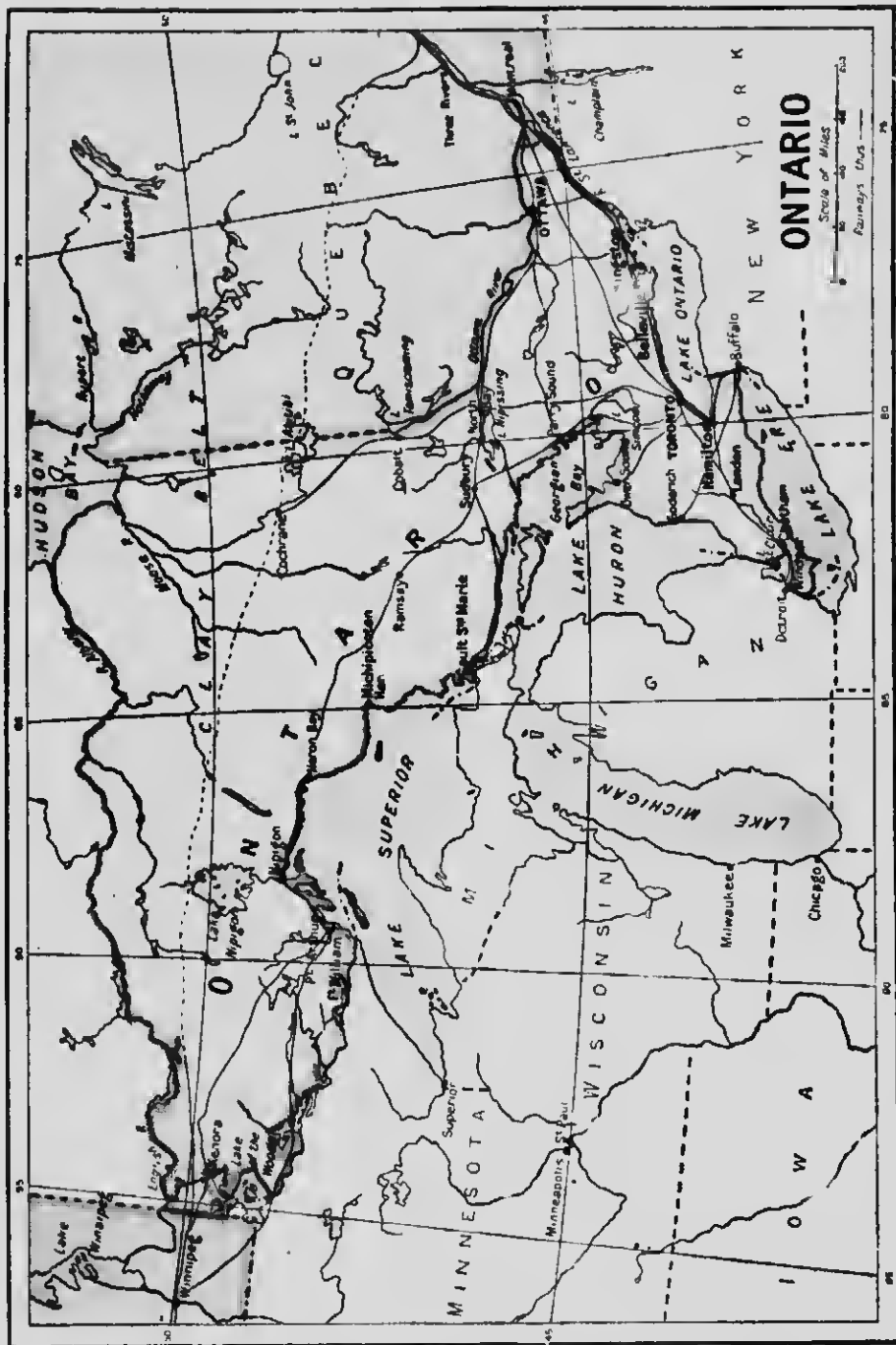
Montreal, for the city began as a mission station for the spread of Christianity among the Indians. Jacques Cartier found here in 1535 a large Indian town, Hochelaga, but ere Champlain came, some seventy years later, the town had been destroyed in the wars between the Hurons on the north of the river and the Iroquois on the south. It was not till 1642 that the French settlement arose, known as "Ville Marie de Montreal." We may see many interesting relics of the early years of the settlement preserved in the old Chateau de Ramezay, once the headquarters of the fur-trade of Canada.

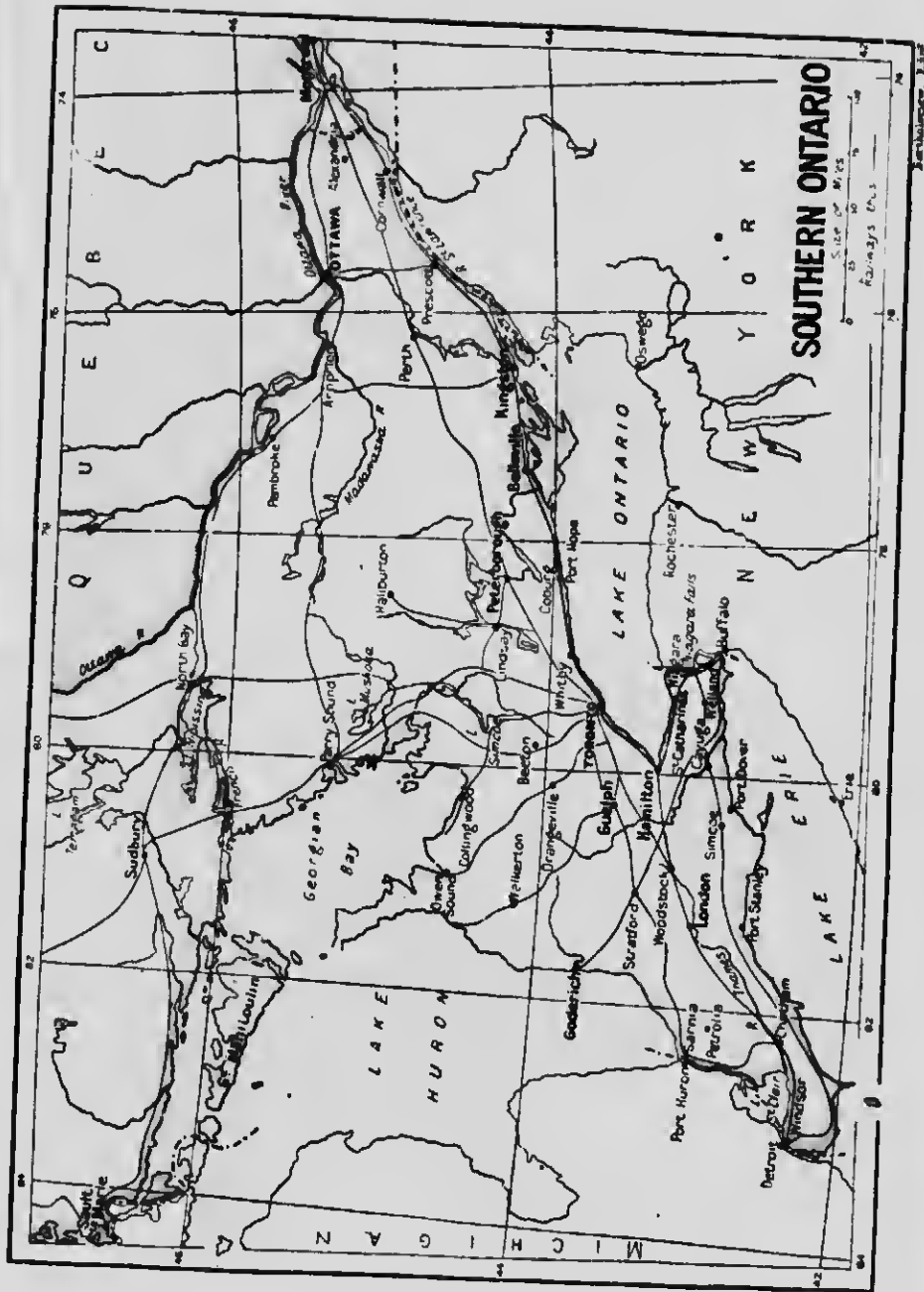
When walking through Mount Royal Park and admiring the wide views all round, we may notice that we are on an island. The island on which Montreal is built extends for about thirty miles along the St. Lawrence, its other sides being surrounded by the two great branches into which the Ottawa River divides before entering the main river. The Ottawa is the largest tributary of the St. Lawrence, and drains an enormous extent of country, for the most part covered with valuable forests, but also including large stretches of cleared and cultivated land. This river marks the south-western boundary of the province of Quebec for a considerable part of its course, and we shall now leave that province and spend some time in exploring the province of Ontario.

Ontario

I

THE province of Ontario lies west of the Ottawa River, and a line drawn from its headwaters at Lake Timiscaming due north to James Bay. Its southern boundary is formed by the St. Lawrence and the Great Lakes, continuing westwards along Rainy River to the Lake of the Woods. There for a short distance it "marches" with the province of Manitoba, until English River is reached. This river and the

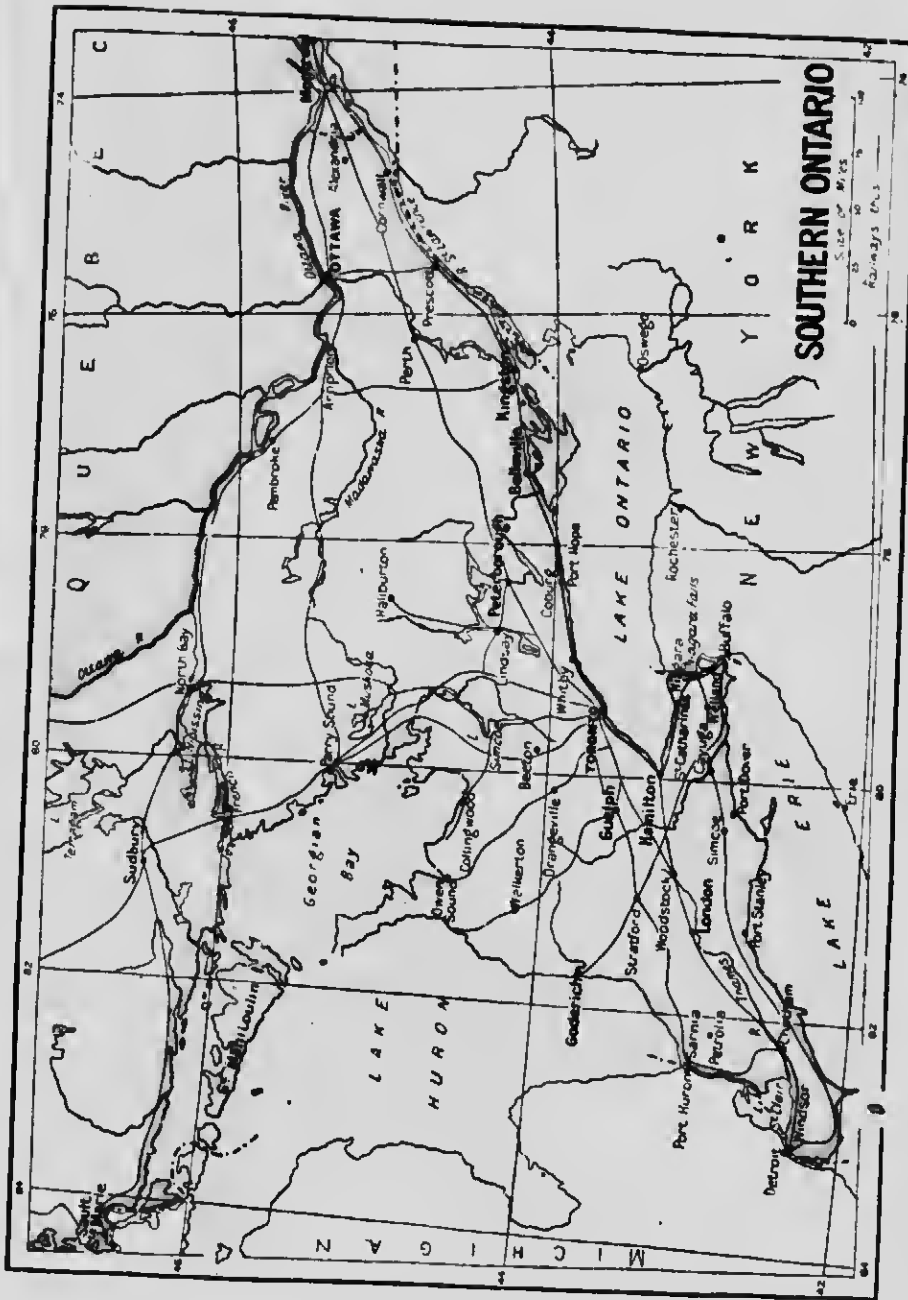




84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Scale of Miles
Railways in Miles

SOUTHERN ONTARIO



84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Scale of Miles
Railways in Miles

SOUTHERN ONTARIO

line of the Albany River, together with James Bay, ~~form the northern boundary of Ontario.~~

As to its natural features Ontario divides into a northern slope and a southern. The northern slope drains towards James Bay by a large number of rivers, which have rocky and rapid upper courses on the higher part of the Laurentian Plateau, and become quiet, smooth-flowing streams when they reach the wide plain which sweeps round the shores of the bay. The height of land in the western part of the province lies quite near Lake Superior. The name Northern Ontario is applied to all the western part, lying north of the Great Lakes and stretching to the east as far as Lake Nipissing.

Lake Nipissing lies between Georgian Bay and the upper Ottawa, and south of this the province widens out into the rich and fertile expanse of Southern Ontario. In outline this part is a great triangle, its north side being bounded by the lower Ottawa, its west by lake Huron and Georgian Bay, and its south-east by Lakes Erie and Ontario and the River St. Lawrence. This great triangular area, and especially its south-east border, includes most of what was formerly meant by "Canada;" for Ontario is the oldest British part of the Dominion, and the part in which most English-speaking immigrants found a home. Before the formation of the Dominion it was known as "Upper Canada."

The whole province lies within the forest belt of the continent. We can hardly believe this to-day, as we travel through the rich farming and fruit-growing lands of Southern Ontario, dotted with busy towns and meshed with a network of railways. But when we go farther north, or up the Ottawa valley, and see the heavy timber of the virgin forest, we realize what a task our forefathers must have faced when they set to work to carve out a farm home for themselves.

Here and there on the higher ground we can see some traces of their yet unfinished labour. We come upon a solid and roomy farmhouse, and round it we see a ring of fields bearing a generous growth of wheat, oats, barley, or roots. Outside this cleared circle stretches a zone of other fields, also under

crop or pasture, but showing signs of Nature's earlier crop. Black and decaying stumps stand stiffly up, looking in the distance like giant bristles, and so close together that we wonder how the farmer can drive his team between them. The outermost zone of the farm is almost untouched, but in parts there is good pasture for the cattle.

The road leading to the house is fenced on either hand with a row of pine-stumps laid on their side, the dense mass of shallow-growing roots making a very effective barrier for the cattle in the fields. It is more than a fence,—it is a fortification: When we look at those thick spreading roots, and then at the bristling stumps in the newer fields, and finally at the clear open area round the homestead, we begin to know something of the labour and perseverance which have made Southern Ontario the rich and open country which it is to-day.

Northern Ontario is for the most part similar to the rest of the great Laurentian Plateau as we have seen it in Quebec. The hard and hummocky rock is somewhat lightly timbered, and there are lakes and swamps without number, linked together by a maze of woodland streams. It is a sportsman's paradise, where hunting and fishing tempt many visitors to a camping trip year after year. Yet so vast is the area that much of it may be called untrodden ground so far as white men are concerned.

Where the northern slope dips down from the hard Laurentian rock to the softer limestone rocks near James Bay, the forest shows the effects of a richer soil and of a milder climate. The trees are of a taller growth, and the ground is no longer a series of rocky knolls. This is the great "clay belt," which was discovered only a few years ago. With a winter less severe than on the rocky uplands, and a soil of deep clay loam, this belt promises to become a rich agricultural region when once the railway has opened the way for settlers. Wheat, oats, barley, hay, and root crops will grow well, and mixed farming and stock-raising will be the leading industry.

II

We will now make a few exploring tours through the province, in order to know more about the various districts and their inhabitants. There is no part of Canada in which we can travel so easily, for Southern Ontario is well supplied with railways. Our first journey must be to Ottawa, which we can reach from Montreal by rail on either side of the Ottawa River. The route on the north side is the longer, and of course lies in the province of Quebec. It takes us through a well-settled district, where the long narrow farms tell of a French population. We stop at Hull, on the opposite side of the river from Ottawa, a busy city, where everything speaks of the lumbering industry. Over against us the river bank rises into a cliff, and on its summit stands a handsome pile of gray stone buildings, with Gothic arches and many spires and pinnacles. This is the place where the Dominion Parliament meets, and where the business of the Dominion Government is carried on. We may call it the political brain of the Dominion.

To the left of the Parliament Buildings rises a giant stair, as it seems to be, in half-a-dozen huge steps from the water-side. That is the entrance to the Rideau Canal, the steps being the locks by which barges are raised to the level of the plain beyond. Still farther to the left are the pretty Rideau Falls, by which the Rideau River descends to the level of the Ottawa, and beyond them, on the low ground, are the suburb of New Edinburgh and the grounds of Rideau Hall, the residence of the governor-general.

We now cross the river by the fine new bridge which here joins the two provinces of Quebec and Ontario. As we do so we cannot help stopping to admire the scenery on our right, where the water of this great river, compressed by its rocky banks into a width of some 200 feet, plunges down a height of fifty feet into a wide basin of tumbling, surging foam; this is well named the Chaudière or "Caldron" Falls. The water-power of this fall is used to drive saw-mills beside the river,



PARLIAMENT BUILDINGS, OTTAWA.

for the Ottawa River is the greatest lumbering centre in the world. One of the sights of Ottawa is the "timber slides," by which logs are brought round the falls to the lower level: we may be allowed to ride down one of these on a crib of squared logs, which is rather exciting, but not dangerous.

We must visit the Parliament Buildings, and enter the chambers where our laws are made, both the House of Commons and the Senate Chamber, and we shall see on the walls of the corridors portraits of all the great statesmen whose names we have met in our history books, as well as a good many of whom we have never heard before. The view from the terrace overlooking the river, or from the tower of the Parliament Buildings, is very fine, and may remind us of that from the citadel at Quebec, or from the mountain at Montreal.

Ottawa is not an old city, but it has already a history of some interest. Early in the nineteenth century, when we were less friendly with our southern neighbours than we now are, the Rideau Canal was made in order that traffic to the lakes might avoid that part of the St. Lawrence where the south shore belongs to the United States. A little town sprang up at the entrance to this canal, and was named Bytown, after Colonel By, the engineer who had surveyed the canal. When this town became a city, its name was changed to that of the river on which it stood—Ottawa.

When the provinces of Upper and Lower Canada were united, a capital was needed for the new state. Several cities competed for the honour of being the seat of government—Montreal and Quebec in the lower province, and Toronto and Kingston in the upper,—and it was hard to say that any one of these had a better claim than the others. So to end the dispute, the matter was referred to Queen Victoria, and she decided in favour of making a new capital rather than choosing one of the older cities. So the little town of Ottawa was chosen, being conveniently placed in the centre of the provinces, for at that time the Great West had scarcely begun to exist. When the Dominion of Canada was formed Ottawa became the Dominion capital, and it has striven to make itself

worthy of this high place among Canadian cities. Year by year it becomes not only a larger but a more beautiful and interesting capital, and draws ever-increasing crowds of visitors.

A mile or two out of the city an experimental farm has been established. There are now many of these farms in Canada, placed here and there on land of different types, where experiments are made in the growing of grain and fruit, the raising of stock, and all the various kinds of farm work. On some of these farms there are also colleges for training the young farmer in the science and the practice of his work. From Ottawa thousands of printed reports and bulletins are sent out every year, giving information to farmers about the many questions that arise as to their work and its difficulties.

Since we are now in the Ottawa valley, we will make an excursion up the river to see more of this region. The great trans-continental line of the Canadian Pacific Railway runs parallel to the river on its southern bank as far as Mattawa, which we may take as the dividing point between the southern and the northern parts of the province. We travel through a forest region, but all along the river front we find settlements where the plough has taken the place of the axe; busy little towns with saw-mills, and some with woollen factories, stand where not long since the fur-trader was the only white resident. Lumbering, however, is still the leading industry in this valley, and in a heavily timbered country the lumberman must always go before the farmer to clear the way.

Autumn is the spring of the lumbermen's year. Their timber "limit" has been surveyed and marked out for them, and by the time the frosts begin to powder the trees their camp is established and the shanty erected which will be their winter home. Then day after day, from dawn to nightfall, the sound of the axe is heard in the forests: part of the company cut down the great trees, lop off their branches, and divide them into lengths suitable for the mills, while the teamsters drag them over the hard snow to the side of the

nearest stream. When spring opens the waters, the lumber harvest must be gathered in; the logs are floated down the woodland streams to the river, and there herded into great parks of water fenced with booms of joined logs. They are then made up into huge rafts, and floated down to one or other of the numerous saw-mills which we pass. During summer the lumber camps are quiet and deserted, and the men are employed either in the saw-mills or on their own farms in the valley, where they must gather in another harvest before winter calls them back to the woods.

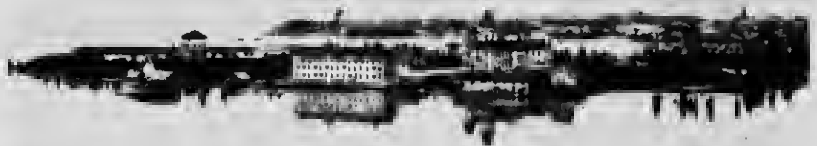


A LUMBER CAMP.

Before we reach the thriving town of Pembroke, we pass some good farming land, where Scottish and German settlers have made their homes. Afterwards the Ottawa valley becomes more narrow and rocky, and farms are few and far between. At Mattawa we find ourselves in the centre of a fine sporting district, where everything necessary for fishing and hunting trips can be obtained. But this belongs rather to the northern part of the province, and so we leave it in the meantime and return to continue our survey in the south.

III

From Ottawa we can make our way to the Great Lakes by means of the Rideau Canal. Owing to the many locks through which our steamer must pass, this trip takes us a whole day, but it shows us some fine lake and river scenery, and a district which is much frequented by visitors for its fishing and duck shooting. There are many towns on this route which are now favourite summer quarters for city people. At the highest point of the water-way, the Upper Rideau Lake, we are 500 feet above the level of the sea, and more than 200 above Lake Ontario. From this point, by means of lakes, canals, and rivers, we drop gradually down to Kingston.



KINGSTON.

Kingston, the "Limestone City," has a beautiful situation at the mouth of the Cataraqui River, on Lake Ontario, near the point where the river St. Lawrence flows out. The gray stone walls of its batteries and towers give it a solid appearance, and it is well placed for traffic by land and water. Its old name of Fort Frontenac and its present name of Kingston remind us of the two great periods of its history, first as an outpost of France against the Iroquois, and then as a settlement of the United Empire Loyalists, who made it a centre of British loyalty and progress. It contains the Royal Military College of Canada, and Queen's University.

A favourite excursion from Kingston is the sail down the St. Lawrence to Montreal, a distance of some 200 miles, which

will occupy us a little over twelve hours. This will complete our view of the St. Lawrence, which we left at Montreal, and will show us a very interesting part of Ontario. Immediately after leaving Kingston we enter the river, which is here about seven miles wide from shore to shore. We see little of its width, however, as the river is broken up with a great number of islands.

This part of the St. Lawrence is named the Lake of the Thousand Islands, but those who have counted them say that the number of islands is nearer two thousand. The Indians called this place the "Garden of the Great Spirit," and it is one of the most beautiful spots in our great Dominion. The islands are of all sizes, some ten or twenty miles long, others mere points of rock crowned with trees and bushes. Many of them are popular summer resorts, with large hotels and boarding houses. They are frequented by visitors from the United States as well as from Canada, for the right bank of the river and some of the islands belong to the state of New York.

After sailing for some forty miles through this fairyland of Nature, we find the river stretching out before us about two miles wide, and flowing between low flat banks which are not of much interest to the tourist. The land here, however, is rich and fertile, producing heavy crops of grain, hops, and fruit of various kinds; and we stop at some busy river-ports, such as Brockville and Prescott. At Prescott we leave the large lake steamer and go on board a smaller one specially built for passing through the rapids that lie before us.

The first of these is the Galops Rapid, where the river is very narrow, and a few miles below comes the Rapide Plat. After a stretch of quiet water we enter the Long Sault Rapids, where there is just enough of movement in the water to make us feel a little excited, but we know there is no danger. After passing through the nine miles of this long rapid we near the manufacturing town of Cornwall, and below this point both banks of the river are British, the south shore being part of Quebec province.

The river now widens out for some miles into the quiet Lake St. Francis, and there we take leave of Ontario for a time, both sides of the river now belonging to Quebec. Next comes a series of short rapids—Coteau Rapid, Cedar Rapid, Split Rock Rapid, and the Cascades. Again comes a broad quiet reach, Lake St. Louis, and we pass two mouths of the Ottawa River, and the town of Ste. Anne, where Thomas Moore, the Irish poet, wrote his famous "Canadian Boat Song."

At last we reach the Lachine Rapids, the most exciting of all. At one point we feel the boat stagger, then suddenly it settles down as if it did not mean to rise again. Next it seems bent on dashing itself against the sharp rocks that lie in its way, but a quick turn of the steering wheel sends it safely past, and it floats out upon the still water below, and finally turns into the harbour of Montreal.

Lachine, or "La Chine," is the French name for China. It reminds us of the time when La Salle and other French explorers were still looking for a road to India and China across the American continent. The town of Lachine is said to have been founded by some of La Salle's men who refused to follow on this quest, and returned to Montreal Island.

Having now seen this interesting part of the St. Lawrence, we return to Kingston and make our way to Toronto, the capital of the province, which is the natural centre for our exploring trips in Ontario. From Kingston we can reach Toronto by the Grand Trunk Railway line, which runs westward along the lake shore. The country through which it passes is very fertile and well cultivated, and on the way we see several busy lake-ports with shipping of all kinds at their wharves.

Soon after leaving Kingston we coast along the beautiful Bay of Quinté, shut off from the open lake by Prince Edward Peninsula. This peninsula has now been made into an island, by the cutting of a short canal across its isthmus, in order to make a passage for shipping at the western extremity of the bay as well as at its natural opening towards the east. On

the shore of the bay we pass Belleville, a city with many industries, and Trenton, where the interesting river Trent flows in from Rice Lake.

After leaving this picturesque district, we hold our way along the level shore, and pass the twin ports of Cobourg and Port Hope, standing within half-a-dozen miles of each other, and Whitby with its railway junction. By-and-by the ground rises in a series of bluffs, and we see the steep clay cliffs of Scarborough rising from the lake shore. A few miles more brings us to Toronto.



TORONTO

IV

Toronto is an Indian name meaning "place of meeting," and was first given to a " " of the Huron country near Lake Simcoe, but it has ve "perly " transferred to the more important "place of il. "ng" which has arisen on the shore of Lake Ontario. The first French fort in the district was

established where the Exhibition grounds now are. When the United Empire Loyalists crossed from the United States, they founded a British town, which was named York, and this was made the capital of Upper Canada. The name was changed to Toronto in 1834.

Founded by Loyalists from the United States, and facing what was for many years a hostile frontier, York had to bear the brunt of the warfare which disturbed the early years of last century. It was twice plundered and burnt by United States troops, being then a village of less than a thousand inhabitants. Yet the York volunteers, at whose head the heroic Brock



PARLIAMENT BUILDINGS, TORONTO.

fell while leading them up Queenston heights, bore a gallant part in those years of warfare. The fate of Canada as a nation was in the balance: Britain, involved in a life-and-death struggle at home, could spare few men to help, and it was chiefly due to the Loyalists of Ontario that the threatened frontier, from the Ottawa to the Detroit River, was held against odds that often seemed hopeless. For at that time the whole white population of Canada was less than that of the city of Toronto to-day.

With peace came prosperity, and the little town, which was the capital of Major-General Simcoe in 1796, and served as

the headquarters of Lieutenant-Governor and Major-General Brock in 1812, became in 1834 the city of Toronto, with 10,000 inhabitants. Its rapid growth in size and importance was due not only to its fine position as the centre of a rich and fertile district, and as a natural outlet for water-borne traffic, but also to the energy and enterprise of its people. For in every city which has ever attained greatness, the character of its people has been the foundation of all that is truly great.

Toronto, as we see it to-day, is the second city of Canada as regards population. Its export and import trade, carried on by



TORONTO UNIVERSITY.

land and by water, is of enormous extent, and its manufactures embrace all kinds of goods which are produced in the Dominion. The fine natural harbour was the reason for first choosing this site for a settlement, and many lines of lake steamers now make it a port of call. Its smooth and sheltered expanse is a favourite spot for sailing in summer and ice-boating in winter.

The city has more than a commercial renown ; it is one of the chief educational centres of the Dominion, and as regards learning and literature it may be regarded as the Canadian capital. We cannot claim to have seen the city unless we have

visited some of the fine schools and colleges, the Normal School with its large museum and picture gallery, and the noble group of University buildings. We find more establishments for the printing and the sale of books than in any other city of our land.

Although it is so busy a city, Toronto is careful of its beauty. Its public buildings are worthy of a capital; the City Hall, in the centre, and the Parliament Buildings, standing on a fine open slope, are no less ornamental than useful. The outskirts of the city, both along the lake shore and on the wooded slopes above, make very charming places of residence. At the Exhibition grounds a great agricultural fair and national exposition is held every year, which draws thousands of visitors from every part of Canada and from the neighbouring States.

V

We must now leave Toronto for a time, and visit some of the busy districts to the west. Our first visit will be to the Falls of Niagara, which is perhaps the best-known spot in Canada, and which draws most visitors to see its wonders. The Grand Trunk Railway line carries us along the lake shore for some forty miles to the flourishing and attractive city of Hamilton, on Burlington Bay, the western end of Lake Ontario. With its mountain in the background, its tree-bordered streets, and its factories, Hamilton reminds us somewhat of Montreal.

On the way to Hamilton we pass through part of the rich fruit-growing district of Ontario, which we sometimes call the "Garden of Canada." When once we leave that city and strike eastwards by the Canadian Pacific Railway, we gradually climb to the top of a steep slope which leads to the higher level of Lake Erie; and from this slope we have a wonderful view of that part of the "Garden" which is spread out before us. The peninsula between the two lakes is the richest and best cultivated part of the whole Dominion.

Between the shore of Lake Ontario and the steep rocky

escarpment which produces the Falls and Rapids of the Niagara River, the whole wide plain is one vast orchard. Peaches and other fruits grow in great abundance. As we look down from the heights in early spring, the rosy pink peach blossoms seem to float over the dark brown soil like sunset clouds. Later, when the apple and pear and cherry are in bloom, the landscape is veiled in a living curtain of the most wonderful white lace. Week by week some fairy change comes over the scene, and we are puzzled to decide which is the most beautiful.



FRUIT FARM NEAR ST. CATHARINES.

This whole area is dotted with houses and villages, and contains the busy city of St. Catharines. Every one is intent upon gathering in the rich fruit harvest, and sending it far away to the markets of the world. The greatest care is taken to plant the best kind of trees, to keep them free from insect pests and blights, and thus to secure the highest quality of fruit. All that science can do to improve these orchards is being done year by year, and the fruit-growers are keen to adopt the newest and best methods of cultivating their ground and of gathering and packing its harvest for the market.

Soon we pass this rich plain, quaintly divided into squares like a chessboard, and come out upon the higher level, with its mixed farming, and fields of grain and pasture. Before we reach the Niagara River we cross the Welland Canal, made nearly a century ago, but much enlarged since then. This canal, with its locks, enables large ships to pass from Port Dalhousie on Lake Ontario to Port Colborne on Lake Erie. Before its opening there was, of course, no passage for shipping, on account of the falls on the Niagara River.



THE FRUIT HARVEST.

We leave the train at the city of Niagara Falls, and spend some time viewing the wonders of the neighbourhood. An electric car runs by the side of the river to Victoria Park, and there we begin our walks of exploration. At first the Falls do not impress us greatly, but when we leave the car and move more slowly along the footpath, we begin to realize the vastness of the scene. At last we can only stand and gaze, fascinated by the ceaseless rush of the water and by the deep thunder of its fall. The longer we stay beside the Falls,

the more do we feel the majesty of them. In spite of all that man has done to make them look small and tame, with his bridges and towers, and factories and hotels, the Falls remain one of the great and strong forces of Nature. We soon realize that words cannot describe their grandeur, and we are content to wonder and admire in silence.

Long ages ago the Falls were some six or seven miles farther down the river than they are to-day, where that steep rocky



POWER-HOUSE AT NIAGARA FALLS.

escarpment crosses its bed at Queenston Heights. Gradually by their own force they have sawn their way backwards to where we now see them, forming that deep gorge with its foaming rapids which extends down the river from the Falls. Now that the Falls have reached a point where the river is wider, and the height of the rocky ledge is less than it was, their backward movement is probably much slower than it once was. Yet the falls of rock which happen



NIAGARA FALLS.

year after year show that the wearing away of the river-bed is still going on.

Every boy and girl has seen pictures and photographs of the Falls, and these give a better idea of the scene than any description can do. What the picture cannot give are the booming roar of the waterfall which fills the ear, and the ceaseless movement which fascinates the eye; and these things are equally beyond the power of words to convey. The only way to understand Niagara is to visit it, not once only, and not hurriedly, but spending many hours or days under the spell of its grandeur, heedless of the crowds that stand for a moment to gaze and then hasten away.

The power of Niagara now spreads far beyond the river itself. On our way from Toronto we have noticed alongside of the railway track a row of tall steel trestles carrying wires or cables. This is the power-line which carries to Toronto and other cities the electric current produced at the Falls. On both sides of the river above the Falls canals are formed, which take off water and carry it to various "power-houses" below. There it is led down huge pipes, and made to turn great turbines or water-wheels. These are joined to powerful dynamos, and thus produce electric current for the lighting of houses and streets, the running of street cars, and the working of factories, some of them more than 150 miles away. So Niagara has been harnessed, and made to do useful work; but we hope that neither the United States Government nor our own will ever allow so much of its water to be taken away for this purpose as to mar the appearance of this great natural wonder.

Returning now to Toronto or Hamilton, we have a choice of many routes by which to visit the western part of Ontario, the great peninsula between Lake Erie on the south and Lake Huron, with Georgian Bay, on the north. There is no part of the Dominion better supplied with railways than this, as we can see by a glance at the map. It is one of the oldest settled parts of Canada, most of the people being of English and Scottish race. The land has long been cleared, the fields and orchards are well cultivated, and country villages have grown

gradually into towns and cities, in many of which are busy factories employed in making tools and machinery and other things needed by the country.

A quiet, prosperous agricultural district such as this is too apt to be forgotten by those who speak and write about Canada. There is nothing startling to tell about the growth of the cities here or the development of their trade. Yet it is just such districts as these that form the most solid foundations of a



VALLEY OF DUNDAS, HAMILTON, SHOWING ELECTRIC POWER-LINE.

nation. They are the home of a capable, industrious people, who make the best of their own lands, and who also send out from time to time well-educated youths to carry on the thousand activities of our great cities, and to develop the resources of our unoccupied territories. The farm is the foundation of every civilized state.

In the centre of this agricultural area stands the city of London, in which most of the place-names have been borrowed from the great Empire capital. This is the largest city in the peninsula, but to the east and west of it are others. Woodstock and Brantford, Stratford and Guelph, and to the

south St. Thomas, all of them with considerable trade in agricultural produce, farming implements, furniture, carriages, clothing, and the other necessaries of life.

As we move westwards, we observe that the farmers have more than one string to their bow. They do not rely on one form of culture alone, such as wheat-growing or fruit-farming, but for the most part engage in mixed farming. But the special kind of farming varies as we pass from place to place. The rich meadows are used to pasture dairy cows, and the cheese factory is the chief centre of profit. In other places horse-breeding is the farmer's main work. Sheep-farming, we notice, is more common on the uplands. Pigs and poultry are a useful source of income on most of the farms.

Towards the south-western extremity of this district we come upon an industry of quite a different kind. Petroleum has been found deep under the soil, and wells are sunk to a depth of many hundred feet, from which an abundant flow is obtained. The town of Petrolia, in Lambton County, takes its name from this, and the tall gaunt derricks which are placed over the oil bores are a feature of the district. The refining of the crude oil is an important industry in Sarnia, on the St. Clair River, the outlet of Lake Huron.

There are other kinds of underground wealth in this part of the province. Near the outlet of Lake Erie natural gas has been found, which is used for lighting, heating, and driving machinery. Towards the Huron shore there are great deposits of salt, lying at a depth of from one to two thousand feet. Salt is much more easy to obtain and to refine than most other minerals. All that is necessary is to sink a bore down to the layer of salt, and force water down into it. The water dissolves some of the salt, and becomes salt water or brine. When this brine is pumped up and the water driven off by heat, the salt again becomes solid. Salt refining is carried on at the city of Windsor, on the Detroit River, and at various places along the shore of Lake Huron.

VI

Having now visited a few typical parts of the older districts of Ontario, we will return once more to Toronto and set out towards the north, in order to see something of the great "New Ontario," which stretches beyond the Great Lakes towards Hudson Bay. In the days when our fathers were at school, this journey would have taken some weeks or months. Now that the railway spans even the wildest parts of the country, we can reckon the time required for our visit in hours, or at the most in days.

The journey before us is a very interesting one, for we are first to traverse the Muskoka district, one of the most famous playgrounds of Canada. This district is now easily accessible. Both the Grand Trunk and the Canadian Pacific Railway have through lines from Toronto to join the trans-continental line of the latter which passes up the Ottawa valley. The former line carries us by the east side of Muskoka Lake to North Bay on Lake Nipissing. The latter passes to the west of those lakes and along the shore of Georgian Bay, joining the trans-continental line at Sudbury. The Canadian Northern system follows a similar course.

The level of the ground rises gradually as we go north from Toronto, and we soon reach the basin of Lake Simcoe. Before the days of railways this lake and its rivers were of great importance for traffic. The thriving towns and villages on its shores are well known to summer visitors and fishermen. North of Lake Simcoe we come to the highland region of Ontario, which is very different from the rich plains and fruitful valleys we have left behind. The hard Laurentian rock shows everywhere in hills and hummocks; the soil is thickly wooded and varied with swamps or muskegs, and mountain streams and lakes abound.

Lying as it does within easy reach of our city people, this highland region draws crowds of visitors every summer, especially the part which lies round the Muskoka lakes. Here are great hotels and boarding-houses, charming villas and cottages,

motor and steam launches, sailing boats and canoes, camping and fishing stations, and everything which the city man can desire to give zest and pleasure to his holiday. Muskoka Lake itself is some twenty miles long, and gives scope for several charming steamboat trips. In the Muskoka Lake Region, however, there are said to be somewhere about a thousand lakes, large and small, while the streams and rivers are innumerable. The district lies about 800 feet above sea-level, and the fresh and pure air found at this elevation has made it very popular as a health resort.

To the north and east of this region lies the Algonquin National Park of Ontario. In this Park, as in the Laurentides Park of Quebec, fishing and hunting are permitted under certain regulations, but the ground with its timber is reserved as national property. Such vast preserves become necessary as settlers push their way deeper and deeper into the valleys, or else our wild animals would be gradually killed out.

These highland regions extend to the limits of what we have called Southern Ontario. When we pass Lake Nipissing we find ourselves in the great northern expanse of the province, which is also called New Ontario. The surface is still the same wilderness of rocky hummocks, rivers, and lakes, with a more or less useful growth of timber. But now we reach a district which, in spite of its untamed wildness, is one of the richest in the Dominion, or indeed in the world. How rich it really is we cannot yet say, for its wealth is but partially explored.

Many generations of hunters and traders had passed over these rocks, and failed to see the wealth which they contained. With the making of railways came a closer study, and since then it has been found that great stores of minerals are scattered far and wide among those barren, rocky hills and plateaus. Here and there on the slopes we can see in the distance a hole dug into the hillside, and a heap of brown rubbish in the valley below. It looks to us just like an ordinary quarry for building stone. Near by are a few rough wooden shanties, or it may be an infant town, and we see jets of steam and hear the noise of engines at work. We wonder at first why men are so busy

in this out-of-the-way place digging out those heaps of rock. But this dull-looking rock is really a rich metallic ore, and when smelted it will yield its treasure of pure shining metal.

We all know the bright smooth coating of nickel which keeps the rust from our cycle wheels and handle-bars, and we like the nickel cents which come our way. A vast amount of nickel is needed every year, and the world depends chiefly upon those rugged hills of Northern Ontario for its supply. Silver looks somewhat like nickel, but is still more valuable, and silver mines are also worked in this district; the mines of Cobalt are famous all over the world. The Sudbury mines yield copper as well as nickel. Copper is also found farther west, along the shores of Lake Superior. Traces of copper mining have been found in the cliffs, which show that this metal was worked here by the ancient inhabitants of the land long before the coming of the white man. In recent times gold has also been discovered in the rocks of certain districts, and Northern Ontario may yet rank among the great gold-producing areas of the world. Iron ore is found in various parts of the province, though the absence of coal renders it of less value than it would otherwise be. Besides the deposits which exist in the eastern parts of Southern Ontario, great tracts of the newer land we are now visiting are rich in iron. In the far west the Rainy River district yields a considerable quantity of ore which finds its way to the foundries of Sault Ste. Marie.

Most of the mineral wealth of Ontario owes its discovery to the construction of the Canadian Pacific Railway, and much more, no doubt, remains to be discovered. The construction of the Grand Trunk Pacific line has opened out new resources. This line runs parallel to the former, about a hundred miles to the north of it, and on the northern or Hudson Bay slope. Here, instead of the barren rocky soil which we should expect, there has been found a strip of country which is finely adapted to agriculture. This strip we have already mentioned as the "clay belt." The clay belt lies to the north of the rough plateau of hard Laurentian rock. The clay rests on a softer

limestone rock, and forms a deep and fertile soil. The railway now offers an easy access for settlers and communication with the markets of the world, and it seems probable that this will ere long be one of the agricultural centres of Ontario.

At Sudbury we may leave the main trans-continental line of the Canadian Pacific, and branch off to the left along the north shore of Lake Huron to the "Soo" or the Sault Ste. Marie Rapids on the St. Mary's River, by which the surplus waters of Lake Superior flow into Lake Huron. The country through which we pass is wooded, and there are timber ports at various places along the lake shore. On the southern horizon we see the long ridge of Grand Manitoulin Island, separated from the shore by the North Channel. This island has still a considerable Indian population, but on its nearer shore are now a number of popular summer resorts.

We find the "Soo" a very busy and important place. Lying between two great lakes, it is a natural crossing for land traffic, and a huge railway bridge at the head of the rapids carries the Canadian Pacific line over into the United States. It is likewise the natural meeting-place of all the waterborne trade between Lake Superior and the lower lakes. The rapids are passable by canoes, but formed a bar to larger vessels until a canal was made on the United States side, and, later, another on the Canadian side. From time to time these canals have been enlarged, and further enlargement will be necessary in the future. A greater amount of traffic passes through the "Soo" canals than even through the famous Suez Canal. In the Canadian city of Sault Ste. Marie we notice great iron foundries and steel works, pulp-mills and chemical works; and beside the steel works, just above the rapids, is a large dock for the landing of iron ore.

But we must return to the main line, and continue our journey westwards. After we leave Sudbury, with its railway junction, its branch lines which serve the chief mining districts, and its foundries which now receive part of the ore from the great ironstone hills in the neighbourhood, we find long stretches of country with little sign of settlement as yet.

There is a wild beauty, however, in the scenery which gives an interest of its own to this part of the country. The hunter finds it an ideal place. There is plenty of timber, lighter or heavier according to the soil, woodland lakes of every size, and mountain streams foaming down their rocky channels. Here and there along the railway small towns have sprung up. Around some of these a considerable area of land is under cultivation. At others there is a brisk lumbering trade. Others, again, are centres to which furs are sent from the wide expanse of country to the north. As we approach Lake Superior we pass one of the busy mining districts of the west.

At last we see the waters of the lake spread out before us, apparently as boundless as the ocean. For some 200 miles of our journey we now keep close to the lake, and the scenery is very grand and impressive. The shore is high and rocky, with many shingly bays and bold headlands. At one moment we are running close to a curving beach, with a frowning wall of cliff overhanging the line. Then we plunge into a dark tunnel cut through the promontory which would bar our way. Again we find ourselves on a narrow shelf cut out of the cliff, and we can look down into the water far below us, or up at the threatening wall of rock on our other side. Now we rumble over a lofty steel bridge, and see beneath us the foaming brown waters of a mountain stream, the home of trout and white-fish; we have a glimpse of the wide valley through which it flows, and perchance of a busy saw-mill on its banks. Or it is a mining district which we pass, and the mention of "gold" makes us wish we could stop long enough to find a big nugget and make our fortune. And all the time we are filled with wonder that men should have had the boldness to plan a railway line along such a coast, and the perseverance to hew it out and make it a safe and pleasant highway of trade and travel.

After a while our view of the great inland sea is broken by islands and peninsulas. We cross Nipigon River, the outlet of the lake of the same name, and sweep round towards the south.

By-and-by a wide bay appears in front, with a great dark mountain mass looming in the distance. This is Thunder Cape, and in a few minutes more we steam into first the one and then the other of the twin cities of Lake Superior, Port Arthur and Fort William. They stand within three miles of each other, and as they grow they will probably merge into one large city.

Here we find again that our watch seems to have gained an



GRAIN ELEVATORS, FORT WILLIAM.

hour during our journey. Fort William is one of those points where railway time must be changed, so as to keep the clock and the sun in agreement. Another change is made here which may strike us as curious. We have been used to reckon the hours of the day from 1 a.m. to 12 noon, repeating the series from 1 p.m. to 12 midnight, to make up the twenty-four hours. West of Fort William the railway time is reckoned from 1 to 24, in order to avoid confusion between "a.m." and "p.m." over the vast distances which the trains have to travel. If we have ever grumbled at 9 o'clock as being too

early for bed-time, we will surely enjoy being allowed to sit up till 21 o'clock!

These twin cities of Western Ontario occupy a very important position for trade, as we can see on the map. Thunder Bay is the head of navigation of Lake Superior, so far as Canada is concerned. Up to this point there is an open water-way by lake, canal, and river, not only from the older parts of the Dominion but from the other nations of the world. And since water carriage is much cheaper than carriage by rail, a vast amount of the wheat and other heavy articles of export and import which pass from and to the great western provinces of Canada must be transferred here from railway to steamship, or from steamship to railway. Even in the old fur-trading days, before white settlers had begun to claim the prairie as their home, Fort William was a station of some importance. East of this point large boats carried on the traffic in furs and barter goods between Montreal and the far-off land of the bison. West of this the canoe took the place of the boat, for the trail led up the Kaministikwia River, by the thousands of lakes and streams which stretch towards the Lake of the Woods and the Winnipeg River and Lake, and so to the many trading stations on the great plains. The old fur store of the Hudson's Bay Company still stands as a memorial of those days.

Enormous grain elevators, some of them the largest in the world, tell us of the vast stream of wheat which pours from the ever-widening wheat-fields of the west towards the busy manufacturing cities of the east. Under the shadow of these huge structures we may see lying some of the great fleet of lake steamships waiting for their cargoes. We notice that other industries have also found a place here—smelting works for the ore found in the neighbourhood, lumber-yards, and great railway workshops.

From Fort William we have still a journey of more than 300 miles before we reach the western boundary of Ontario. The country is little developed as yet, being known chiefly to the sportsman and the trapper. Water-ways are everywhere, and some of them are large enough to allow steamboat com-

munication between the railway and the gold-mining districts which lie to the south near the Rainy River. The government have established an experimental farm at Dryden, near the western extremity of the province, in order to encourage agriculture here. The soil is good and is easily cleared, and settlers can readily find winter employment in the lumber camps.

There is abundance of water-power, waiting to be made use of. At Kenora, where the wide-spreading Lake of the Woods finds an outlet into the Winnipeg River, a powerful waterfall has already been harnessed, and produces electric power for many smokeless factories. Great mills have been built for dealing with the raw products of the west,—saw-mills, pulp-mills, and flour-mills. The lake itself is one of the most beautiful in Canada. It is of great extent, and is broken up by innumerable wooded islands. Summer camps and houses are now found on many of these islands, where people from the city of Winnipeg come to spend a long holiday, and the Lake of the Woods now ranks with the lakes of Muskoka as one of Ontario's health resorts and playgrounds.

The mention of Winnipeg city reminds us that we have now reached the western limit of Ontario. Part of the Lake of the Woods belongs to Manitoba, and we shall next continue our westward journey into that province. Much of Ontario has been left unvisited, and we cannot find time for a journey to those plains which lie round Hudson Bay, silent now and unoccupied, except by the trapper and the fur-trader. Yet when the railway pushes northwards, and a port is opened on the shore of the bay, we may find that this area is by no means a desert. The history of our Dominion has been a history of the gradual discovery of one source of wealth after another, of which men had never dreamed, and perhaps we have not yet come to the last chapter of that story.

Manitoba

WE have now traversed all that our grandfathers called "Canada" and a little more, but we have only reached the middle of our great Dominion. Before us lie a thousand miles of the richest soil in the world, half an empire in itself, which was long regarded as a mere hunting-ground of the red man. Even less than a century ago it was "The Great Lone Land," shut off from the older Canada by those miles of rugged uplands which we have crossed so rapidly by rail.

The fur trade found an outlet by Hudson Bay on the north, where ships from the Old Country brought year by year men and goods to carry on this traffic with the Indians. Another and more convenient approach was through the United States on the south, and considerable traffic passed up and down the Red River. The direct route, as we have said, was by the St. Lawrence and the Great Lakes and thence by canoe from Fort William.

When the various provinces of Canada formed themselves into one Dominion, British Columbia was cut off from the others not only by the Rocky Mountains, but by many weeks' journey over the prairies and by the lake and river route, and she urged the formation of a railway across the continent which would bring her into a real union with her sister states. This wise plan was carried out, and the great Canadian Pacific Railway was driven through rock and muskeg and mountain pass, over swift rivers and boundless plains, until a smooth line of steel stretched from ocean to ocean. Yet there were many who thought that building a railway over this Great Lone Land was the merest folly and a huge waste of money.

The making of this railway opened a new chapter in our country's progress. The prairies of the west were brought to the very doors of the east, for in every hour of its running the train covered more than a day's journey by sledge or by canoe. Then men began to see that the prairie was a great national heritage which had been hidden merely by its distance,

a boundless succession of fields and farms, waiting only for the settler to sow the seed and gather in the harvest. From the prairie region which was thus opened up by the railway three provinces have been carved out—Manitoba, Saskatchewan, and Alberta—and we shall now continue our journey westwards, visiting each of these in turn.

Manitoba was formed into a province in 1870, when the Dominion took over the control of the great North-West. This huge territory had formerly been owned by the Hudson's Bay Company, which not only carried on the business of fur-traders, but was the actual government of the country as well. Manitoba forms an area of two hundred and seventy miles square, bordered by Ontario on the east and the United States on the south; it has no natural or geographical boundary on any side. It occupies part of the drainage system which centres round Lakes Winnipeg, Manitoba, and Winnipegosis, and discharges by the Nelson River into Hudson Bay. The greater part of this lake-group lies within the province, about one eighth of its whole area being water. The southern part of the province is crossed by the Red River, which enters from the United States, and by its important tributary, the Assiniboine.

As we enter Manitoba by railway from the east, we may wonder why it has been called the "Prairie Province," for our way still lies over the rough rocky surface of the Laurentian Plateau. But soon the landscape changes. The surface shows wider spaces of smooth ground, and by-and-by the rocky hummocks disappear. The woods open out, and are seen only in the river hollows. In a short time the country has changed its aspect, and we have entered upon the real level prairie. We gradually find ourselves in a land divided by wire fences into farms and fields of varying size, the farm-houses and their barns standing up here and there against the horizon.

By-and-by we pass the scattered blocks of houses that mark the outskirts of a great city, and in front stretches a wide expanse of tall business buildings, grain elevators, mills, and factories. We glide over a broad muddy river, and come to a

halt under the smoke-begrimed roof of a large railway station. This is Winnipeg, the capital of Manitoba, which will form the centre of our surveying trips in that province. The spider's web of railway lines which radiate from the city will make it easy for us to see all that we wish.

The city of Winnipeg is one of the wonders of Canada. Only a century ago the plains were swarming with bison and other game, the untamed flocks and herds of the red man, whose tepees were the only human dwellings. White men and half-breeds traded with the Indians for furs, the Hudson's



WINNIPEG, MAIN STREET.

Bay Company and the North-West Company of Montreal each striving to obtain the lion's share of the trade. Forts or trading stations were planted here and there along the rivers, which were the highways of communication. The junction of the Assiniboine with the Red River was one of the most important of these trade centres, and here the competition between the rival companies led to much bad feeling.

Lord Selkirk, of whom we have already spoken, saw that this part of the prairie was a splendid site for a settlement of farmers. He bought from the Hudson's Bay Company a tract of land on the banks of the Red River, and sent out a large

party of Scotsmen who could not find in their own country land for themselves and their families. They came by the usual route of the company, by Fort York and the Nelson River, and selected farms on the ground which is now covered by the city of Winnipeg. The wide road which ran through the Red River Settlement is now known as Main Street.

The new colonists had much trouble with the North-West Company, who wished no settlements to be made in the fur country, and some of them left and settled in Ontario. Others came out from Scotland to take their place. By-and-by the two fur-trading companies united, and the Red River Settlement was allowed to take root and grow up in peace. It consisted merely of a line of farms running for two or three miles along the left bank of the Red River, and Fort Garry, the large trading station of the Hudson's Bay Company, which was surrounded by a strong wall. Where the fort stood we can still see one of its old gateways,—at the south end of Main Street. But there was no "Main Street" then, and no city of Winnipeg.

It is very interesting to hear from the "old-timers" of Winnipeg the story of its growth. We may meet with one who came west when there were only two or three hundred people in the settlement and the fort together. He will tell us how he used to shoot wild duck or prairie chicken on the very spot where he now has his home—a solid two-storey city house, standing on a busy, well-paved street. It seems impossible that all this great city has been built in the course of one man's lifetime.

The opening of railway connection with the United States first started real growth in Winnipeg. Then came the great trans-continental line of the Canadian Pacific, and soon the city began to draw hundreds and thousands of people. If we look at the map we see that Winnipeg stands on a narrow point of prairie which stretches eastward towards the Great Lakes, while the country to the north is unsuitable for railways. Winnipeg is thus the natural meeting-place of all railway lines which join the east to the west ; and as more railways

are opened across the continent, the city will grow in size and importance. The immense depôts of the Canadian Pacific and the Canadian Northern systems, with their stock-yards, elevators, stores, and workshops, give employment to whole armies of men. As we pass along the streets we are impressed with the width of the roadway, the lines of shade trees, and many other points which show enterprise and foresight in the people. The supply of electric power for street cars, lighting, and other purposes comes from the Winnipeg River, in the rocky north-eastern corner of the province.

We have noticed in entering Manitoba that the province is not all prairie. The east and north belong to the rocky Laurentian region of Canada. In the north-west, again, the ground rises from the lake-level into the high ridge of Duck Mountain and Riding Mountain. These are not real mountains, however, but merely the steep slope or escarpment of the higher plain to the west. All this high ground is wooded, and in the north-east lumbering is carried on. The central part of Manitoba, on both sides of the Red River, is different from the rest of the prairies. It is lower in level, being only about 800 feet above the sea. Long ago this low ground was the bottom of a great lake, but of this lake only the deepest parts now contain water; they form Lakes Manitoba, Winnipeg, and Winnipegosis. The rest of that old lake bottom now forms the rich black soil of the Red River valley, the most fertile part of the prairie. About a hundred miles west of Winnipeg, we reach the second prairie level. The ground shows gravelly bluffs which mark the shore of the old lake, and the elevation rises gradually to over 1,000 feet. This second prairie steppe is also extremely fertile, though the soil is of a different type.

The district round Winnipeg is one of the least attractive parts of the province, as much of the land seems to be lying waste, waiting till the growth of the city turns it into building sites. Beyond this we find a region of wheat farms, some of them so large that farmhouses are few and far between. Where the farms are smaller, the country looks more like a

home-land for its people, and here and there we see districts with quite a large farming population. Towns are rising wherever the railway has been made, and some of these have already become cities. Brandon is one of the most pleasing to our eyes, standing as it does on a height overlooking a wide sweep of the Assiniboine River, and faced by a long fertile slope on the farther bank. It stands in a good agricultural district, and the government of the province have an experimental farm near by. Nearer Winnipeg, on the lower steppe, is the city of Portage la Prairie, the centre of one of the best grain-growing parts of the province.

Manitoba is a young province and a busy one, both in town and country. Yet she is not without her playgrounds where the over-worked city man and his young folks may find rest and amusement. Some make their summer quarters in camp or cottage among the islands of the Lake of the Woods. Others prefer the more social life of a bathing and boating holiday at Winnipeg Beach, a summer resort at the south end of Lake Winnipeg. The fishing in this and the neighbouring lakes is excellent, and a large fishing industry has sprung up there. Autumn hunting trips among the mountains in the north-east afford sport to many.



EXPERIMENTAL FARM, BRANDON.

As we travel over these wide prairies our general impression of the farming country is that it looks very empty when compared with eastern Canada. This is partly due to the vast size of many of the farms; the work is done by a few men, using steam or motor power, and few houses are needed. Such farms seem to be huge wheat-ranches rather than homes. We wonder how the boys and girls like those immense farms, where their next-door neighbour is several miles away. We should prefer living in one of those quaint French settlements in the east, where the houses are grouped into long



ENGLISH IMMIGRANTS, WINNIPEG.

straggling villages. Even if we should have to go a mile or so to work in the farthest field, we should prefer to have the boys next door near enough to hear us when we whistled, for we might have something very important to tell them which would spoil with keeping.

Sometimes we come to places where wheat does not rule so absolutely; the farmer keeps a herd of good dairy cows, or a flock of sheep, or he rears horses. There are more houses to the square mile, and more people living on the land. Such places look more home-like; they are not merely growing food for other countries, they are rearing young Canadians

as well, and it is the men and women of a country that form its most valuable crop.

Before we leave Manitoba, we must spend a few hours at the railway station to see the immigrant trains come in. This is a great sight, and as we watch the hundreds of new-comers, from the older provinces, from Britain, and from many of the nations of Europe, we learn a lesson about our country which makes us think a good deal. All through the spring and summer this stream of new Canadians is pouring in, at the rate of about a thousand a day. We now begin to realize how vast a land lies to the west of us. All these families will find work on the older farms, or will settle down on new farms of their own, and still the land seems empty, and will do so for many years to come.

Most of these immigrants are going on to the newer provinces, for the best of the wheat lands of Manitoba have already been taken up. Some of them remain in the city to find work of various kinds. We hear many strange and unknown languages spoken all round, and we learn that in this one city copies of the Bible are sold in about forty different tongues! But whatever tongue they speak when they arrive, we are glad to think that in a year or two all the children will be speaking and reading English. For here and there throughout this wide and mixed city, and all over the province, we have seen the Union Jack flying above a fine solid building which we know is a public school. Every one of these schools is a busy factory, turning young immigrants of all races into loyal English-speaking Canadians, and preparing them to work side by side with those who were born under the old Flag.

This is the great problem of the prairies. The railways have solved one problem—that of opening the doors and bringing in people. The schools must solve the other problem—that of making the new-comers, or at any rate their children, true Canadians, loyal to the Flag and the Empire, and worthy to be fellow-citizens of those United Empire Loyalists of whom we have spoken.

Saskatchewan

WEST of Manitoba a huge rectangular block of the prairie has been marked off and formed into the province of Saskatchewan. The present boundaries of this province and of Alberta were fixed as late as 1905, and these two provinces are the youngest members of the Canadian family.

Saskatchewan is usually called a prairie province, but only the southern part is of the open grassy type of plain which is properly called prairie. The province extends across the drainage basins of several rivers. The south-east lies in the



A PRAIRIE HOMESTEAD, FIRST YEAR.

basin of the Assiniboine and its tributaries. This is true prairie country, containing the second steppe of the plain which begins in western Manitoba. North of this is an area drained by the two great branches of the Saskatchewan. Here the plains are varied with timber, and in many parts are closely wooded.

From the centre northward the province lies within the great forest belt, and is little known except along the routes of the fur-traders. It is crossed by the Churchill River with its many lakes and tributary streams, whose waters flow towards Hudson Bay. In the far north the drainage is towards the Mackenzie basin, part of Lake Athabaska lying within the

province. Here the growth of timber is less heavy, and the stunting effect of the winter cold is seen, especially in the eastern part of the province. Not far off lie the great "barrens," where the forest has given up the struggle for life.

In this new province the railway has opened the way to the farmer. Along the Canadian Pacific line we find the oldest settlements and the largest towns. Other railways have been built, however, the Canadian Northern and the Grand Trunk Pacific, and along each of these has sprung a strip of wheat-fields, houses, and towns, stores, grain elevators, churches, and schools. It is a country in the making. At almost every railway station there are piles of goods and farm implements belonging to immigrants who have just left their special train. Here we see a family still living in tents; their horses and cattle are grazing close by, while children and dogs together are keeping an eye on them. The men are busy putting up a frame, which a day or two later will be a house. There are two or three wagons driving off from the railway, laden with household goods and provisions—and a house as well, for those boards and lumber will soon take shape when the selected spot on the prairie has been reached. Here we notice a group of houses close together, and a few others scattered in straight lines on the grassy plain. Next year or next again this will be a town, and those broad grassy avenues will be streets.

Shortly after we enter Saskatchewan by the Canadian Pacific trans-continental line, we find that our watch must again be put an hour back, for at Broadview we enter the region of Mountain Time. Then we pass through one of the richest wheat areas of the west. Everywhere the ground is under this crop, usually in very large farms, and the town of Indian Head is the chief centre for the harvest. We have been accustomed to the sight of grain elevators ever since we entered on the prairie, but Indian Head seems a town of elevators. A dozen or more of these huge buildings stand at the side of the railway track, making it look like a street of houses built for giants.

About midway across Saskatchewan, we stop at Regina, the

capital of the province, an active and growing city, with a fine range of government buildings rising on the edge of a small lake. Regina was a capital before Saskatchewan was a province; it was for a time the centre of government for the whole of the vast territory extending from Manitoba to the Rocky Mountains and from the United States boundary to the Arctic Ocean. Regina was therefore, and still is, the headquarters of that famous body of men, the North-West Mounted Police. To these 600 men, half soldier, half police, was given the task of keeping order and doing justice and enforcing the law among natives, half-breeds, traders, miners, and settlers,



GOVERNMENT BUILDINGS, REGINA.

over a country greater than many an old-world kingdom. The marvellous success with which these men have done their work, and still continue to do it, is one of the things of which Canadians may well be proud. Love of fair-play, even-handed justice, self-control, respect for law, devotion to duty, —these are the secrets of their success, and these are the things which make a country great; not its broad acres, its rich mines, or its factories and markets.

From Regina we can make some interesting excursions towards the north, and see the parts of the province where growth is at present most active. Taking the Canadian Northern route, we cross the Qu'Appelle River and journey over a somewhat thinly settled region until we reach the South

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Saskatchewan. This is a large stream, and like most prairie rivers flows in a deep trench-like bed cut two or three hundred feet deep into the plain. Here we come upon Saskatoon, one of the young and growing cities of the west. Saskatoon is one of the natural meeting-places for railway lines, and that, as we have seen, is one of the things which makes a town important and causes it to grow. But Saskatoon is aiming at better things than merely growing big, for here we find the University of the province, and its Agricultural College.



FIELD OF BARLEY, INDIAN HEAD.

We next cross a fertile belt of land, already well occupied, which lies between the two branches of the Saskatchewan. Many of the original settlers here were French half-breeds, and being dissatisfied with the rule of the Dominion Government, they rose in rebellion in 1885 under Louis Riel, who had been the leader of a rebellion in the Red River Settlement fifteen years before. The rebellion was serious while it lasted, but was effectually suppressed, and Riel was hanged.

By-and-by we reach the North Saskatchewan, and stop at

Prince Albert, some thirty miles above the junction of the two rivers. Prince Albert has a beautiful situation and a varied industry. It still holds an important place in the fur trade. Standing as it does within the timber belt, it has also developed into a lumbering centre. The coming of the railway has made a great change in Prince Albert. It is the starting-point of the new railway to Hudson Bay, of which great things are expected in the future.

The prairie wheat farms send nearly all their harvest eastwards; part of it remains in Canada, but much of it is shipped to Europe. The great problem for the west, therefore, is to find a cheap and short road to the Atlantic. It is for this that so



CUTTING HAY, INDIAN HEAD.

much money has already been spent on our canals, and for this also men are planning out a great new canal from Georgian Bay by the Ottawa to the St. Lawrence. At present the shortest railway route to the head of navigation is that to Fort William, after which comes the long passage through the lakes, canals, and rivers of the St. Lawrence route. Hence the wheat-growers of the west have for years been turning their eyes towards that other great water-way into the heart of Canada—the route through Hudson Bay and Hudson Strait, which was so long followed by the fur trade of the Hudson's Bay Company.

The railway from Prince Albert will probably reach the shores of the bay at Port Churchill. Now Port Churchill is as

(1,500)

near to Liverpool, the great English sea-port, as Montreal is, so that the saving in sending a cargo of wheat by Prince Albert and Port Churchill instead of by Winnipeg and Fort William would be very considerable. There is one drawback, however: the winters are longer in Hudson Strait than on the St. Lawrence, and we do not yet know how many months of the year this new route will be open. But in the recent past we have made many new discoveries about our unknown north, and it is possible that the ice of Hudson Strait may be less of a barrier to trade than many people expect.

We must resume our way to the west, however, and turning our steps southward to Regina we shall continue to follow the



FRUIT FARMING, INDIAN HEAD.

line of the Canadian Pacific, in order to see the districts which have been longest settled. Once more we board the trans-continental train, and by-and-by we arrive at a town of some importance, as we see by its elevators, stock-yards, and mills. The name of the town, and of the creek on which it stands, Moosejaw, seems rather curious to us, but it would have been still more curious if the whole of its Indian name had been used instead of only a part, for the original name is said to mean: "The-creek-where-the-white-man-mended-the-wagon-with-a-moose-jaw-bone."

Just before reaching this town, we notice a railway which joins the main line on our left. This line comes from the United States, crossing the boundary at North Portal, and

in recent years it has been a very useful one. Hundreds and thousands of United States prairie farmers have been crowding into our prairie provinces by this route, and making new homes for themselves and their families. They used to think that the Canadian prairies were mere deserts, but they know now that there are better wheat lands on our side of the international boundary line than on theirs, and less danger of crops failing through drought.

These immigrants are a very useful class of settlers for our great new West. They know how to manage a prairie farm, while many of our European immigrants have little knowledge of farming, and have been accustomed to a different climate. The United States settlers are soon better off than they were in their former home, and they find that under the Union Jack there is no less freedom than under the Stars and Stripes. Schools are springing up in these new lands faster than teachers can be found for them, and the children of these new-comers will be educated as sturdy and loyal Canadians.

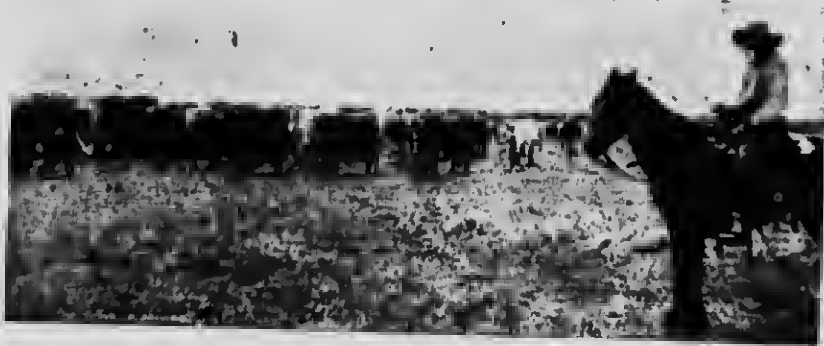
West of Moosejaw the ground becomes more rolling in its appearance, and we gradually climb up to the third prairie steppe. This stretches on in front of us till we reach the Rocky Mountains, and its average level is over 3,000 feet above sea-level. In all this area the land has been more used for cattle-ranching than for wheat-growing. Here and there on the grassy slopes, or by the side of some creek or lake, we pass great herds of cattle and horses. At the railway stations the chief feature is not the grain-elevator, but the stock-yard with its fences, where cattle are gathered together and put into the cars for our eastern markets.

Alberta

ALBERTA, the twin sister of Saskatchewan, now stretches in front of us from the provincial boundary to the Rocky Mountains. On the west, the ridge or water-parting

of that range forms a natural boundary between Alberta and British Columbia for about 400 miles northwards from the United States. In the northern portion, the boundaries follow the lines of latitude and longitude on the map.

Almost the whole of southern Alberta is drained by the north and south branches of the Saskatchewan River and their many tributaries. Northern Alberta consists of the gathering-ground of the Athabaska, together with a large part of the basin of the great Peace River. This river may be regarded as the main river of the Mackenzie system. It joins with the waters of the Athabaska immediately to the north of Lake Athabaska, and the combined stream flows



CATTLE RANCH.

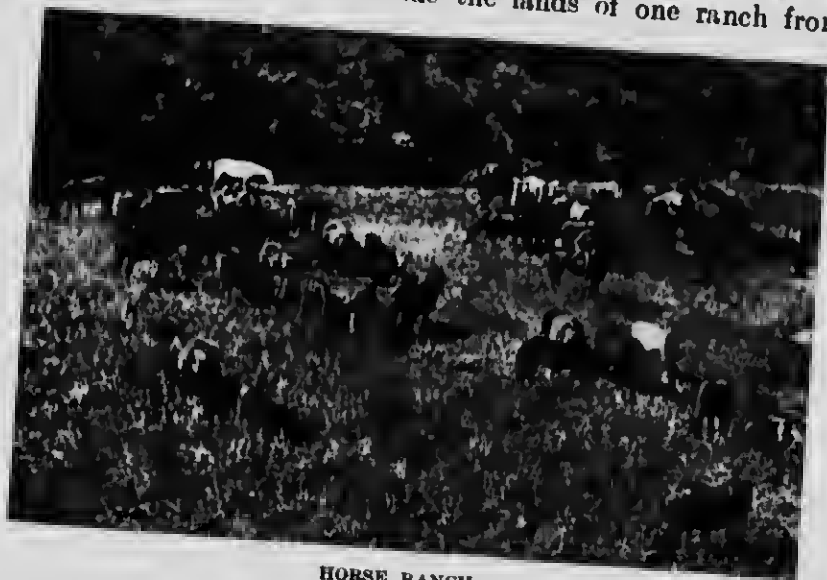
northwards under the name of the Slave River; it is only after leaving the Great Slave Lake that the river receives the name Mackenzie.

Until we approach the mountain region, we find the surface still prairie, but it is no longer the flat prairie of the lower steppes. The ground becomes more and more uneven, with here and there low rounded ridges of hills. The rivers flow more rapidly than on the level prairie, and they have cut deeper courses for themselves. These courses are often two or three hundred feet deep, with steep wooded banks.

Southern Alberta is the finest ranching and cattle-rearing country in the world. There is plenty of water for pasture, although in some parts the rainfall is hardly sufficient for wheat-

growing. This is the region of the Chinook wind, which blow from the western mountains. In the autumn the rich grasses dry where they stand and turn into a natural hay. The snow is never so deep that cattle cannot reach the grass underneath it. So the farmers leave their flocks out of doors all the year round, and have no need to provide winter fodder and housing for them as in eastern Canada.

The great ranches of this region can hardly be called farms, for there is no fence to divide the lands of one ranch from



HORSE RANCH.

another. When the herds get mixed up they can easily be separated again, as each animal is branded when young with the mark of its owner. The cattle roam over miles of pasture, and are followed and guarded by "cow-boys" on horseback. They are "rounded up" or gathered together only when the season's calves are to be branded, or when a herd of steers is to be "cut out" and driven to market.

But the day of the cattle ranch and the cow-boy will soon be over. The farmer is now seeking out the best of the land, fencing it in and cultivating it. Where the rainfall is too light, he has invented a new way of treating the soil. He keeps

the top layer always stirred and open; this loose dry soil, lying on the top, protects the damp soil below from the hot sun and the parching winds, and so the moisture is not drawn away from the roots of the plants. In many parts of the province, however, a still better plan is in use for keeping the crops supplied with water. Great irrigation canals have been dug which lead water from the rivers out upon the plains, and branch canals supply each farm with its share. When thus watered, the fields grow abundant crops of all kinds. Among the root-crops, the sugar beet is becoming one of the favourites.

Soon after entering the province of Alberta we arrive at the city of Medicine Hat, where the south Saskatchewan is crossed by a fine bridge. An English writer has called Medicine Hat "the city that was born lucky," on account of its many natural advantages. It enjoys a milder climate in winter, and a lighter snowfall, than any part of Canada we have yet visited. Fruits grow well, and there is a government farm to encourage their cultivation. But Medicine Hat is specially lucky in its underground stores of wealth. Natural gas is found in such abundance that it is said to be cheaper to leave the gas burning in the streets all day than to hire men to turn it off and light it again. This gas provides cheap power for factories of various kinds, and these are rapidly increasing in number.

Before entering Medicine Hat we notice a railway line branching off to the left. This leads to the great mining areas of the Rockies, through Lethbridge and over the Crow'snest Pass to the famous Kootenay district of British Columbia. Lethbridge lies out on the plains, and is the centre of a rich coal-mining area. Coal is sent from the Lethbridge mines as far east as Winnipeg, westwards to British Columbia, and southwards to the United States. This part of the prairie, which is now famous for its red wheat, was formerly one of the chief cattle-ranching districts of Alberta, and that industry is still the most important one round the town of Macleod, some thirty miles to the westward. Beyond Macleod rises the jagged, snow-flecked mountain ridge which forms the boundary of the province.

We are to continue our journey on the main line from Medicine Hat, however, and after a run of about 180 miles we reach the busy and important city of Calgary, the largest centre of commerce between Winnipeg and Vancouver. Our route takes us through a great irrigation area, to which water is led by a large canal from the Bow River. This river is an important tributary of the South Saskatchewan, and is one of the channels by which the melting snows on the Rocky Mountains are carried on their long journey across the prairies to Hudson Bay.

Here the Canadian Pacific Railway Company have shown us a new way of bringing to Canada what is her truest wealth



IRRIGATED FARMS.

—namely, settlers who will cultivate the land and live on it as their home. The company first of all constructed great water-channels to bring water to the land. This irrigated land was then divided into farms, smaller than the prairie farms, because they are suited not only for wheat-growing but for root-crops, cattle rearing, and mixed farming generally. On these farms the company build houses, and break up and seed part of the soil. When a farmer from the Old Country or from the Eastern Provinces buys the farm, he finds everything prepared for him, and a crop getting ready to be harvested. This is a much more pleasant way of making a new home than camping out on the unbroken prairie and facing the rough work which "homesteading" always requires.

The settler on one of these "ready-made" farms must, of course, have more money to begin with, but the plan has worked well, and drawn many farmers of a fine type from the Old Country.

Calgary is very pleasantly situated on the Bow River, on the lower and inner side of a bend in its course. The opposite side is high, and is a fine site for residences, for it commands a splendid view over the river and the city, and westwards over the foot-hills, where the peaks of the Rockies show clear in the blue distance. It has many trades and industries, doing business not only with the farms and the cattle ranches,



INDIAN CAMP, NEAR CALGARY.

but also with the mines. Here we meet once more with the lumber trade, for logs are brought down from the mountains by the Bow River.

At Calgary we must stop and pay a visit to the capital of the province, Edmonton, nearly 200 miles to the north. We pass through an open rolling country with little timber, and the white deposits on the margins of the ponds and streams show that there is some alkali in their waters. The land is mostly used for cattle rearing, but we see also many stretches of cultivated ground and growing villages and towns.

On the way we are reminded sometimes of the past of the country, which already seems so distant. Here, for instance, is an ancient trail of the bison, and we notice a huge boulder

of granite which they used as a "rubbing stone." A deep trench is worn round it by the feet of thousands of those vanished lords of the prairie. There again, in the very middle of a flock of steers in a fenced pasture, we see a couple of coyotes standing and watching our train. Settlement and cultivation are driving the wild creatures further and further back into the mountains, but the farmer must still guard his lambs from such visitors in the spring-time.

As we cross the height of land between the two branches of



EDMONTON.

the Saskatchewan, we find the ground more thickly wooded, and pass many charming streams and lakes where we should like to wander with rod or gun. The railway stops at Strathcona or South Edmonton, on the south side of the river, and we are conveyed across the bridge to Edmonton by bus or electric car. A high-level bridge will shortly carry the railway across the river gorge to the north side, where the Canadian Northern already has a station.

The situation of these twin cities, Edmonton and Strathcona, now united into one, is very beautiful, and more impressive than any that we have seen since leaving Quebec. The river

flows in an enormous gorge cut deep into the plain, in a fine curving sweep, with rugged slopes which in many places are not too steep for streets and houses. On a bold hummock on the northern slope we see the old stockaded fort of the Hudson's Bay Company. Near it rises the massive pile of the new Government Buildings. The main part of the city is built on the level ground above.

The people of Edmonton have a fine opportunity in the site of their city, for if they lay out those river slopes in a manner worthy of their natural beauty, their city will be one of the most picturesque in the Dominion. The principal street of



VIRGIN HAY FIELD, PEACE RIVER DISTRICT.

Edmonton is already one of the finest we have seen, for the side-walks are quite free from the ungainly poles that mar most of our city views, and the electric wires are carried in underground channels. This gives the city a more finished and unencumbered look than any we have hitherto visited.

Edmonton was long an important post of the Hudson's Bay Company, and is still one of the chief centres of the fur trade. It is now becoming an important railway centre also, and is a meeting-place of the three main railways of the west. Standing in the centre of a rich agricultural district, its trade is increasing year by year. Coal is known to exist in the neighbourhood, in many places cropping out on the surface.

Natural gas is also found, and the sands of the river yield a small quantity of gold, washed down from stores which must exist higher up its course.

Edmonton used to be called "the station for the north pole." Civilization ended here, and traders in the northern regions had to rely on dog-sledge and canoe for their conveyance between one post and another. Northern Alberta was supposed to be good for nothing but a hunting-ground. Now we know that this is all a mistake. In the wonderful valley of the Peace River, some 500 miles to the north, there waits for the farmer one of the finest countries in the west. It lies about 1,500 feet lower than the lands we



WHEAT FIELD, FORT VERMILION, PEACE RIVER.

have just passed through, and this gives it a milder climate in spite of its more northerly position. The snowfall is often very light and always moderate, while the warm mountain winds bring mild and even balmy weather. The summers are as warm as in the Saskatchewan valley. Climate and soil alike are as favourable for farming as in the south of the province. When once the railway has opened wide the door for settlers, Edmonton will be the station not for the north pole hut for a new Alberta.

In the meantime we must return to Calgary in order to complete our trans-continental tour. Our face is once more set towards the great mountain ridge, whose distant peaks we have seen from time to time standing out sharply against the

sky. We race onwards along the Bow River, and the mountains rise sheer in front, a wall of rock which seems to have no gateway. Yet there is an entrance prepared for us by Nature; during the course of long ages the river has been carving out a way, and levelling it as if on purpose for a railway track.

In the open valley we pass great ranches where troops of horses and vast herds of cattle are grazing. Here and there appear the pit-head works of a coal-mine, or a saw-mill on the river bank. Then we enter a gap in the mountain wall, the gateway which the river has made to the wonderland beyond.



VERMILION FALLS, PEACE RIVER.

On every side rise pinnacles or domes of rock, frowning cliffs, and steep pine-clad slopes. Many peaks are 10,000 feet above sea-level, and more than 5,000 above the level of the railway. We cannot find words to describe the majesty and grandeur of the scene. The world seems full of peaks and ridges, tossed and tumbled and scarred and riven. We have forgotten that there exists such a thing as a prairie or a plain of any sort; our mind is filled with the mountains.

By-and-by we enter one of those great spaces which are preserved as National Parks, and we are on the look-out for

the herd of bison which has been brought here to live a life of safety from the hunter. There they stand, gazing at the train as it passes, a picture of Canada's past face to face with its present! This Rocky Mountain Park is the largest park in the world, and is full of wonderful natural scenery.

We stop at Banff Station, and visit the village, which stands on the Bow River. Banff is one of our most delightful holiday resorts, and draws visitors from all over the world. It has fine hotels, and everything is provided which tourists in search of pleasure or of health can desire. There are hot sulphur springs near the village, with a good bath-house and open-air



THE GAP, THE ENTRANCE TO THE ROCKIES.

swimming pond. Roads and paths invite to walking, cycling, and driving. For those who enjoy the more strenuous work of mountain climbing, experienced guides are waiting. Camping, canoeing, boating, and fishing fill up the days of many visitors. Shooting is not permitted in the park, but good hunting-ground lies within easy reach to the westward.

After leaving Banff our road still leads for some forty miles through the wonderful Rocky Mountain Park. At Laggan we find another centre for tourists, who may stop here to visit some of the most beautiful mountain lakes in the world, or to be led by Swiss guides up to glaciers as grand as those of

Switzerland itself. All this time the railway line has been gradually rising, and some half-a-dozen miles beyond Laggan we reach the highest point in our crossing of the Rockies. We are now 5,320 feet above sea-level. We leave the Bow River, and turn to the left along a small feeder which oozes out of a marshy lake or pool. Here we notice a rough wooden arch standing near the line. The curve of the arch is formed of large wooden letters, which spell out these words "The Great Divide."

Beyond this spot the water oozes out of the marsh on the other side; it forms a stream which flows westward, and finds its way at last into the Pacific Ocean. It seems strange to think that the water-drops in that pond, all lying so close together before starting on their life's journey, will soon be separated so widely, some reaching the wide Pacific, and others making their way to the Atlantic by Hudson Bay. The place may well be named "The Great Divide."

As we cross the height of land, we enter the province of British Columbia, for the watershed forms the natural boundary between this province and Alberta.



[Photo Canadian Pacific Railway.]

THE GREAT DIVIDE.

British Columbia

B RITISH COLUMBIA had little connection with the rest of Canada before the Dominion was formed. Separated from the older provinces by thousands of miles of unexplored country, it could best be reached by way of the Pacific Ocean. Before the end of the sixteenth century, a Spanish navigator, Juan de Fuca, had discovered the strait which bears his name. One of the earliest explorers of the Pacific coast was Captain Cook. He is connected with our history in another way. When a young man he was a sailor on board one of the ships which carried Wolfe's victorious army up the St. Lawrence to Quebec, and he showed much skill and daring in going out in a small boat, in the face of Montcalm's batteries, and taking soundings of the channel by which the great ships might approach the city. Later he explored the coasts of another of our British Dominions, the Commonwealth of Australia, and it was on his last voyage, in 1778, that he did the same for our great western province of British Columbia. Captain Cook was one of our great Empire Builders, though his work was not of the warlike kind that covers men with honour and glory in the pages of history.

Captain George Vancouver was the first to explore the great island which is named after him. About the same time Alexander Mackenzie was the first to cross the Rockies and reach the Pacific from the eastern provinces. In 1800 David Thompson journeyed from Red River by almost the same route that we have followed in the train, crossing the mountains by the Bow River valley, and descending to the coast by the river which bears his name. Simon Fraser and David Hearne were also among the pioneers of the west. Those early travellers were chiefly interested in the development of the fur trade, and in 1849 the Hudson's Bay Company leased Vancouver Island as a trading-ground. Some ten years later, gold was discovered in the Fraser River valley, and there was a great inrush of miners into that part of the province. The

whole area between the Rocky Mountains and the coast was then formed into a British colony, under the name of British Columbia, and in 1868 Vancouver Island was joined to this colony.

Then came the movement for a wider union among the Canadian provinces, and in 1871 British Columbia became a province of the Dominion. But it was still an isolated province, cut off from the others by 500 miles of mountain and 1,500 miles of plain. There could be no real union without some means of communication. Hence arose the demand for a trans-continental railway, and the daring scheme which resulted in the opening of the Canadian Pacific line in 1885. The last spike which was driven in this long iron trail was the final rivet in a chain which bound the Dominion together in one whole.

The surface of British Columbia, as we see when we approach its borders, is very different from the rest of Canada. It is almost entirely a land of mountains. We have seen hilly country in the east, but this is quite different. There we saw great plateaus of hard rock, seamed with river valleys, so that the surface is no longer a plain but a succession of rounded hummocks and ridges. Here we see gigantic upheavals of the crust of the earth, which has been crumpled and folded into lofty ridges and deep valleys. The ridges themselves have been gradually carved out by water into canyons and gorges, with the harder parts standing out as true mountain peaks.

There are three such ridges in British Columbia, forming distinct ranges of mountains, and all running parallel to the coast. The first ridge is the Rocky Mountains, which forms the watershed or "great divide" between the rivers flowing towards the Atlantic and those falling into the Pacific. On the west side it sinks down into a long valley.

Beyond this valley rises another range, not so continuous as the Rockies, but broken up into parts which bear distinct names, such as the Selkirk Range, the Gold Mountains, and the Caribou Mountains. Next comes a wide plateau, but it is so

cut up by river valleys and water-courses that much of it has also a mountainous appearance. In parts, however, this plateau spreads out into wide areas of pasture and agricultural ground.

West of this plateau comes the third great mountain ridge, the Coast Range, which is 100 miles in width, and sinks down on its western slope into the waters of the Pacific. There is, or rather there was long ago, a fourth range of mountains to the westward of the Coast Range, but by a gradual sinking of the earth's surface this range is now mostly covered by the ocean. The highest parts of it stand up as a chain of islands, of which Vancouver Island and the Queen Charlotte Islands are the largest. By the same sinking movement, the cross valleys and canyons on the west side of the Coast Range have been laid under water, and these "drowned valleys" now form the wonderful straits and bays and fiords, or canals as they are sometimes called, which break up the coast line of the province.

The climate of British Columbia, as a whole, differs considerably from that of the central and eastern parts of Canada, and within the province itself there are great variations of climate. The key to all these differences is to be found in the ocean winds of which we have already spoken, and the mountain ranges which cross their path. The islands and the coasts have a mild and moist climate, tempered by the warm currents of air and of water which flow in from the Pacific. There are no extremes of summer heat or winter cold.

As the air currents rise to cross the Coast Range, much of their moisture is condensed into clouds, and there is a heavy rainfall on some parts of the coast, especially in the north. When the wind has crossed this ridge and descends to the interior plateau, it is somewhat like the Chinook winds of Alberta, warm and dry; and so we find a dry belt of country immediately under the "lee side," as we may call it, of the mountains. By-and-by the ridge of the Selkirks must be crossed, and so the air rises into a still colder region than before.



SNOW-SHEDS IN THE SELKIRKS.

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British Columbia

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Here it parts with most of its remaining moisture, and little is left to be deposited on the Rocky Mountain ridge beyond. So we find a much heavier fall of rain and snow on the Selkirks than on the Rockies.

The whole of British Columbia lies within the forest area of Canada. In the north-east, the country of the Peace River and other streams of the Mackenzie basin, the timber is mixed with open pasture. The higher parts of the mountains rise above the timber line, and their steeper slopes afford little



LUMBERING IN BRITISH COLUMBIA.

foothold for trees, but almost everywhere else there is a heavy covering of timber trees, many of them of enormous size. Lumbering, mining, and fishing have been the three great industries of the province; the cultivation of the soil is comparatively a new industry, but fruit-growing as well as other forms of farming is now rapidly extending.

But we must resume our journey, for our train is still waiting on the boundary of the province at the Great Divide. We are really entering British Columbia by its back door; its front is towards the ocean of the west. There are more back doors than one. We might have entered by the Crownsnest Pass, and

explored the great mining districts round the Kootenay Lake and River. Coal is abundant near the pass, and at Fernie there is a great coal-mining and coke-making industry carried on. Gold, silver, and copper mines are worked in this part of the country, and towns and cities have sprung up in recent years. Rossland stands among hills rich in ores of iron, copper, silver, and gold. Nelson, on the Kootenay Lake, has much trade connected with mining, and also with lumbering and the newer industry of fruit-farming.

Other back doors are opening to the north. The new trans-continental route of the Grand Trunk Pacific, which passes through Edmonton, enters the province by the Yellowhead Pass over the Rocky Mountains. This is the best crossing place from the Athabaska basin to that of the Fraser River, and the line traverses the greater part of the province by following the upper course of this river. It crosses the Coast Range by the valley of the Skeena, and its terminus at Prince Rupert is a new front door for the province which is only beginning to open. The course of this line is through country which is only imperfectly known as yet, but a new belt of settlement will follow on its construction. Large deposits of coal have already been found near its course, and there may be much more natural wealth still lying undiscovered and waiting to be made use of. The Canadian Northern, also passing through Edmonton, will shortly extend a third trans-continental line to the Pacific coast, and open a new front door of trade, under the name of Port Mann, at the mouth of the Fraser River, close to the city of New Westminster.

The middle back door by which we now enter is the oldest, and leads us into a wonderland of scenery such as no other country can surpass. But however much it may charm the eye of the visitor, it is by no means the kind of country to please a railway engineer. When we leave the Bow River valley behind, and cross the famous Kicking Horse Pass into the valley of the Kicking Horse River, we can see no possible route for a railway. It is all one maze of canyons and cliffs and mountain peaks with snow-caps and glaciers. Yet the

line has been made, and it is a triumph of bold planning and patient working out.

Between Stephen, the summit station of the Rockies, and Field, the distance is only ten miles, but in these ten miles we descend more than 1,200 feet. The slope of the river is too steep for the railway, and the valley is too narrow to give room for any divergence from the course of the river. So the



KICKINO HORSE CANYON.

engineer has driven into the mountain-side a tunnel shaped like one complete turn of a corkscrew. The train plunges into the darkness of this tunnel, which is over 1,000 yards long, and comes out into the daylight again exactly below the hole at which it went in, having descended a hundred feet in the interval. Then it crosses the river, and plunges into another spiral tunnel in the opposite mountain, coming into the light of day another hundred feet lower than where it

went in. The effect of all this turning and twisting is very puzzling to us, and we find it difficult to say on which side of us the sun will be shining when next we see his face. This section of the line has been most costly to make, and the spiral tunnels are the first that have been made on this continent to give easy grading on a mountain pass.

Field is an important centre for mountain climbing, and there are many summits near which exceed 10,000 feet in height. Swiss guides are provided to attend on tourists who wish to follow this form of sport. Field is also a favourite stopping-place for anglers, and for those who wish to visit the mountain lakes and waterfalls in the neighbouring valleys. Here we must again put back our watches an hour, as we have now entered the belt of country where Pacific Time is used. The time on our watches is now four hours behind that in the eastern provinces where we began our journey: when we sit down to breakfast at nine o'clock, the people of Halifax are beginning their one o'clock luncheon, and it is noon over most of Quebec and Ontario. This difference in time helps us to realize the enormous extent of our native land.

Our route still follows the valley of the Kicking Horse, often a mere gorge or canyon, and the line twists and turns this way and that, now a mere notch cut into the wall of a cliff, now tunnelling through a projecting angle, and again crossing a gap by a spider-web of steel. The bends are so sudden that as we look out of the window of the observation car we can often see our engine and the front part of the train hending round to right or to left, as if they were coming back to meet us. Solid as we know the track to be, at times we cannot help clutching the seat and holding on when we see the awful gorge beneath us and the foaming torrent which is racing us downhill.

By-and-by we reach the valley of the Columbia River, which here flows towards the north between the Rocky Mountains and the Selkirks. This latter range we must now cross. We turn to the west, up the gorge of the Beaver River, climbing

steadily upwards between lofty mountains. We pass through many strong, massive snow-sheds: these protect the lines from snow-slides or avalanches, which would otherwise sweep away the slender track from the shelf on which it is laid. At last we turn up Bear Creek and reach the watershed of the Selkirks at Roger's Pass, 4,350 feet above the sea.

From Roger's Pass we have another exciting run down the valley of the Illecillewaet River. The scenery is grand beyond the power of words to describe, and all round us rise great



AMONG THE SELKIRKS.

mountain peaks and ridges with vast snow-fields and glaciers. The railway doubles and twists in a maze of turnings in order to make the descent more gradual, and on looking back we can see at one view four different tracks by which we have zig-zagged down the mountain side. After a run of fifty miles, we again come upon the Columbia River, this time flowing southwards. Its size is much increased by the many tributaries which it has received since last we saw it, for the river winds round the north end of the Selkirk range while we have come straight across. Its valley here lies between the Selkirks and the Gold Range. The town of Revel-

stoke, on the Columbia, where we now stop, is an important centre of trade with the mining regions to the south. The river widens out into the beautiful Arrow Lakes, giving an easy approach to the Kootenay district of which we have already spoken.

We next attack the Gold Range, crossing by the Eagle Pass, but this is a very easy climb compared with the two passes which we have already crossed. On our way down the valley of the Eagle River we may notice a little monument standing near the station of Craigellachie. It marks the place where the last spike was driven in the railway line which binds together in one Dominion the shores of two oceans. The building of the line had been carried on from both sides of the mountains at once, and the two parties of workers met here. When the laying of the rails had been completed on 8th November, 1885, Lord Strathcona arrived by train from the east, and drove in the last spike which held the last rail in its place. Then for the first time it was possible for the conductor to call, "All aboard for the Pacific!"

We are now in the interior plateau region of British Columbia, but we see it is by no means a plain. The landscape is hilly for the most part; sometimes the slopes look very dry and parched, as if gravel rather than soil covered the face of the country; but the valleys are well watered, and we pass many fine lakes. Beside one of these, the Great Shuswap Lake, stands the town of Sicamous, where an important railway line branches off to the south, leading to the famous Okanagan Lake and Valley. This route passes through a district which has been called the "Garden of British Columbia." Here are great horse and cattle ranches, and some of the largest and richest fruit farms in Canada. The climate is delightful, and the slopes and meadows are a blaze of colour with their carpet of wild flowers. Peaches and apricots, as well as apples, pears, plums, and cherries, grow to great perfection.

We keep to the main line, however, and we soon find ourselves running a race with the Thompson River through a fine ranching country. We pass the town of Kamloops,

which is the centre of a wide grazing and mining district, and has a number of busy mills and factories. As we advance the valley becomes narrower and the hills more steep and bare, but the rocks show much variety of colour, which



[Photo. Canadian Pacific Railway.]

“DRIVING THE LAST SPIKE.”

gives a strange and unusual beauty to the scene. At last the river is confined within a narrow canyon; but suddenly this canyon opens into a wider one, and our river joins a much larger stream, the Fraser, which flows from the north in a strong and rapid current.

We have now reached the third mountain ridge, the Coast

Range, and the Fraser River Canyon is our only road through it to the ocean. It is a wild and romantic road, and again and again we hold our breath as we look down into the gorge below, where the waters whirl and foam in their rocky channel. Through tunnels and cuttings, over slender bridges and along narrow ledges the train dashes on its way, and we marvel at the skill and daring which planned and built such a line. The beauty of the scenery can never be forgotten by one who has seen it, and nothing more grand and impressive is to be found in any land.



HOP CROWING.

After some fifty miles of this magnificent canyon, we find that we have reached the western side of the great Coast Range. The valley widens out, and the river pursues its way so quietly that from the old trading town of Yale it is navigable by steamer. Soon we become aware that we have entered a new region of Canada. The trees which we pass are of a height and girth far beyond what we have seen elsewhere. All the vegetation shows by its luxuriance that the climate here is specially mild and moist.

Other things appear strange to us. In the orchards and

vegetable patches and at the doors of the houses we notice people of a new race ; they are Chinese, as we see by their faces and their dress. Here is a railway gang, standing aside till our train passes ; by their dusky features and black beards and calico turbans we recognize them as Hindus. At a saw-mill a railway truck is being loaded with sawn timber ; all the workmen are Japanese.

While we have been travelling westward we have also been drawing nearer the East—that wonderful East which Columbus



APPLE ORCHARD.

set out to find when he ran up against America—and here are people from the various nations of the east of Asia, who have crossed the wide Pacific to find a new home or to earn some money and go back to their old home. Their native countries are overcrowded, and it is hard to make a living there, so they regard Canada as a land where great wealth is to be won. But though Canada needs men to make her strong and great, it is men of her own race and not Asiatics that she wants, and the people of British Columbia do not care to have their

Pacific front door wide open to immigrants from the coasts of Asia.

Soon we cross the rich plain which lies round the mouth of the Fraser; leaving that river and bending to the right, and the shimmer of water appears in front. This time it is neither lake nor river; it is the Pacific Ocean itself; we have crossed the continent from sea to sea. But we do not see much of the Pacific to begin with. There is a long narrow winding bay with low sloping shores, and beyond it a bold ridge of



GOLD WASHING NEAR YALE.

pine-clad mountains. This is Burrard Inlet, and soon we are at the end of the wonderful steel trail which we have followed so long. We are in Vancouver city, and if we are curious to know the exact length of the road we have travelled we find that we are now 2,897 miles distant from Montreal, by the direct line through Ottawa.

Vancouver is one of the most wonderful cities of Canada for its age. In 1885 the Canadian Pacific Railway Company decided on making Burrard Inlet their western terminus, and it was only then that building began. Next year, however,

a great fire completely wiped out the infant town, and a new beginning had to be made. The population went up by leaps and bounds, and the city grew and spread in the most marvellous way; indeed, it is still growing rapidly.

Vancouver has a beautiful situation, and we are delighted to see that its people are careful to preserve its beauty. The sea-ward end of the peninsula on which it is built would make a fine town site, but they have set aside this area as a public park. Stanley Park, as it is called, redeems the city from being a mere seaport and commercial centre. Its huge trees,



SALMON FISHING.

among the largest in the world, its bold cliffs and smooth beaches, its walks and drives, its zoological gardens with bison and elk and other wild animals,—all combine to make this park a space of more value to the city and its people than if it were covered with streets and business blocks, however costly.

We have called Vancouver the front door of British Columbia, and we soon see that it is a very busy one. Between its wharves and its railway depôts there flows a constant stream of traffic. All the products of the interior, especially lumber, are being handled here, and steamships from far-off China and Japan, as well as from the American Pacific coast, remind us

of how great our sea-borne trade in the west is now growing to be.

A few miles to the south, on the banks of the Fraser River, stands the city of New Westminster. This was formerly the trade outlet for the west, but when Burrard Inlet was chosen as the Canadian Pacific railway terminus, the city was "side-tracked," and its newer rival soon outstripped it in size and importance. But a new day is dawning for the older city. The south side of the river, nearly opposite, is selected as the ocean terminus of another great railway, the Canadian Northern, and the building there of Port Mann will bring New Westminster once more close to the trade current which flows between the wide lands of the west and the distant sea-ports of the Pacific.

New Westminster is worthy of a visit, however, if it were only to see the salmon canning establishments. Salmon fishing is one of the great industries of this province. At certain seasons the coast waters and the rivers swarm with salmon. Hundreds of boats, mostly manned by Japanese, put out to sea and catch these great fish in strong nets. They are taken ashore and cleaned by machines invented for this purpose; they are then cut up, packed into tins, cooked, and sealed so as to exclude the air. In the rivers vast numbers are also caught, and we may see groups of Indians busy with their nets as we pass along in the train.

We must not forget that new door on the Pacific which is now opening—the town of Prince Rupert, some 500 miles to the north of Vancouver. This town, as we have said, owes its birth to the Grand Trunk Pacific Railway. There is plenty of room for all those doors on this rich and fertile coast, where as yet very little use has been made of our natural wealth.

Our railway journey has been long, but we must travel a little further yet if we are to complete our visits to the capitals of the provinces. Settlement in the west began on Vancouver Island, not on the mainland, and we must cross to this great island if we wish to see the capital of British Columbia.

A four or five hours' sail from Vancouver on a swift steamship carries us across the island-studded waters of the Strait and Gulf of Georgia into the Strait of Juan de Fuca, at the south end of the island, and we steam into a winding land-locked bay, on the shores of which stands the city of Victoria.

This city has one of the most beautiful situations in Canada, and though it lacks the bustle and traffic of the port we have just left, it is worthy of its dignity as a capital. The harbour is busy with shipping, and a short railway line to Nanaimo opens up a rich coal-mining area. Facing the main harbour are the noble and massive Government Buildings, and the slopes above the bay are occupied with streets of fine houses. Everywhere there are signs of wealth, and we are not surprised to learn that many who have made their fortune elsewhere choose Victoria as their home when they retire from business.

The climate is the finest in Canada. Snow rarely falls, and winter frosts do not check vegetation. The rainfall is sufficient, but not so heavy as on the mountain slopes of the mainland. Summer heat is never oppressive, and the ocean winds bring refreshing coolness in the evenings. The people of Victoria are justly proud of their climate.

Immediately to the west of the harbour is a bay which we find interesting—Esquimalt Harbour. This was formerly a station for the British Navy, as it will be for our Canadian Navy in the future. To the east is Oak Bay, a favourite holiday resort. On our way thither we may cross Beacon Hill Park, and the view from this point is memorable. Behind us lies the winding harbour and the busy wharves and streets of the city, backed by the slopes where gay gardens, well-built houses, churches, and other buildings tell of a solid and prosperous city life. Southward spreads the broad strait of Juan de Fuca, on the farther shore of which rises dark and massive the snow-capped range of the Olympic Mountains in the state of Washington. Far in the east rise the dim blue ridges of the Cascade Range, and Mount Baker, though seventy miles away, stands clear on the horizon as a perfect cone of glittering snow. Nearer spreads a maze of green islands and



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shimmering seas, with the sails of fishing craft or the trailing smoke of steamships adding a touch of human interest to the natural beauty of the scene.

Vancouver Island has been little developed, and much of it is as yet unexplored. The island is nearly 300 miles in length, and from 50 to 80 in width. It is mountainous, with peaks rising over 7,000 feet above sea-level. There are vast areas of virgin forest waiting for the lumberman, as there also are all along the shores of the mainland opposite and towards the north. The mineral wealth of the island is little known as yet, but the coal-fields of Nanaimo, on the east coast, have been worked for many years. With its pretty gardens and tidy cottages, Nanaimo is very unlike the grimy mining towns which one sees on most coal-fields.

The west coast of British Columbia is now becoming a favourite place for a summer holiday voyage. There are steamships which make regular coasting trips from Victoria. The route lies close to the mainland, and is so sheltered by the islands which fringe the coast that rough seas are little to be feared. The scenery is very grand, and from the deck of the steamer we can enjoy the ever-changing picture of lofty mountains, forest-clad or snow-capped, of green islands, rocky cliffs, and blue winding channels.

Here and there an Indian village is passed, and at some of these are seen those curious carved and painted "totem poles," of which each tribe seems to have its own special form. In the Queen Charlotte Islands live the Haida Indians, who are in some ways the most intelligent and civilized of the native tribes. Long stretches of the coast are passed without any trace of settlement, but at the mouth of the Skeena River, near Port Essington, there are a number of salmon-canning establishments, while on the peninsula immediately to the north the port of Prince Rupert is springing into life.

On the south side of the next opening on the coast, Portland Inlet, is Port Simpson, a station of the Hudson's Bay Company. This is the most northerly coast settlement in the province, for the opening beyond, Portland Canal, is the boundary between

Canada and Alaska, and to the north of this the coast slope and the islands belong to the United States. This is by no means the most northerly point in British Columbia, however, for its territory stretches 400 miles farther north, where the line of latitude 60° is reckoned as the boundary between it and Yukon Territory. Here, however, we may complete our round of visits through the provinces of the Dominion, which we have passed in rapid survey from the great ocean on the east to the still greater ocean on the west.

The North-West Territories

THE nine provinces through which we have travelled do not make up the whole of Canada. To the north of these lies a vast belt of land extending from Alaska to Labrador. It is divided into the Yukon Territory and the North-West Territories. There are too few white inhabitants in these regions to carry on an organized government such as that of the provinces, and a commissioner for each of the two divisions is appointed by the Dominion Government. The settlers in Yukon send one member to the Dominion Parliament, and also elect some of the members of the commissioner's Council, so we may call this territory a province in its infancy.

These territories contain rather more than half of the area of Canada. The territory of Yukon extends from British Columbia northwards to the Arctic Ocean, and from the Alaskan boundary eastwards to the watershed of the Rocky Mountains. The south-east corner of the territory crosses this watershed and lies in the basin of the Liard River, a tributary of the Mackenzie. The rest of the country slopes to the north-west, and consists, for the most part, of the valleys of the Yukon River and its feeders. This river crosses the international boundary and flows westwards through Alaska, falling into Bering Sea. The south-western part of Yukon is occupied by the Coast

Range, which reaches a height of over 19,000 feet in Mount Logan. The rest is of more moderate elevation, varied with hill and river-valley, and the Rocky Mountain ridge sinks down towards the north into ranges of low hills. The valleys towards the south are densely wooded, but as we go northwards we pass beyond the zone where trees can grow, and reach the barren fringe of the frozen Arctic Sea.

Before the year 1896 Yukon was little known. In that year reports began to spread of wonderful finds of gold in the sand and gravel of the Yukon valley. Next year crowds of miners set out on the old, old quest, the search for gold. The usual hardships of the pioneer were greatly increased by the severe climate of the northern mountains, and many of the gold-seekers knew nothing of the difficulties which lay before them. Their road lay by Skagway in Alaska, at the head of the Lynn Canal, over the White Pass to Lake Bennett, at the head of the Yukon River. They must then sail down that river and its rapids for some 500 miles before they reached the Klondike district where the precious metal lay waiting to be gathered up. Hundreds perished by the way. How many fell victims to the dangers of the pass, and how many to the rapids, will never be known.

A railway over the White Pass was begun in 1898. The difficulties to be faced were enormous, but through summer and winter alike the work went on, and two years later trains were running between Skagway on the Pacific coast and White Horse on the Yukon, below the White Horse Rapids. The distance is only 111 miles, but two passes nearly 3,000 feet high had to be crossed, and many of the rocky slopes were so steep that the men who blasted out the track along the hillside had to be supported by ropes while they worked. From White Horse to Dawson, the centre of the Klondike, traffic is carried on by steamer during the summer and by sleigh during the winter. Dawson has varied much in population according as the yield of the gold-mines rose and fell. At one time it numbered over 10,000 inhabitants. Through the control of the commissioner appointed by the Dominion



EARLY DAYS IN THE KLONDIKE.

Government, and the activity of the North-West Mounted Police, Dawson has escaped most of the troubles to which mining towns are usually exposed, and is now an active, orderly town, provided with all the necessaries of civilized life.

The gold is chiefly found among the gravel deposits of the Klondike River, a tributary of the Yukon. The gravel is mined during the winter, and when summer loosens the river-



SWITCHBACK CANYON, ON THE YUKON RAILWAY.

current, the season's digging is washed, and the grains of gold carefully collected. Gold has also been found in the south at Atlin, near the railway, and copper is known to exist at White Horse.

East of Yukon, on the other side of the Divide, lies a part of the North-West Territories formerly known as Mackenzie. It lies between the provinces which we have

visited and the Arctic Ocean, and consists, for the most part, of the lower basin of the Mackenzie River. It contains two immense lakes, Great Slave and Great Bear, and a vast number of smaller ones. This district is a rich fur-producing area. Its scanty population consists of Indians and a few Eskimos; but here and there over its wide extent the forts or stations of the Hudson's Bay Company stand on the shore of lake or river—the only centres of civilized life. The Company's steamers carry on communication during the summer from Athabaska Landing in Alberta down to Lake Athabaska; thence to Smith's Landing on the Slave River; from Fort Smith to Great Slave Lake, and down the Mackenzie River for a thousand miles to its delta on the shores of the Arctic Ocean. If we make this inland voyage, we shall have our eyes opened to some things about the climate of Canada, and the conditions of life in the far north.

We have already seen that under the east side of the Rocky Mountains the wheat belt stretches northwards to the Peace River district and even beyond it. This journey will show us that the forest belt also bends to the north along the Mackenzie River, far beyond what we should have expected. The Pacific climate modifies the seasons, and the country is wooded down to the head of the river delta on the fringe of the frozen ocean. The ocean itself is more open at this part than it is to the east, and United States whale fishers are busy here during the summer.

Our starting-point for this journey is Edmonton. Setting our faces towards the north, we follow a wagon road for a hundred miles to Athabaska Landing; but the road is being superseded by the railway, for Athabaska Landing is the doorway to the rich Peace River country of which we have spoken. We then continue our way by the large "sturgeon-head" boats, or the river steamers of the Hudson's Bay Company, landing to avoid the worst of the rapids that bar the way. There are ninety miles of rapids between us and Fort M'Murray, after which we have smooth river sailing as far as Lake Athabaska. Below this the main water-way bears

the name of the Slave River, and our steamer carries us gaily along as far as Smith's Landing.

Between Smith's Landing and Fort Smith, where we leave the province of Alberta, there is a stretch of some fifteen miles of rapids, and we must make a portage here and join another steamer below. This is a rich fur-producing district, as indeed is the most of the territory, and here also are to be seen the only wild bisons in the Dominion. They are not the common prairie bison, which is now no longer found wild, but wood bison, somewhat larger in size and darker in colour. On our way down-stream to the Great Slave Lake we may come across some family groups of the moose, for this great deer has his home among these woods.

At the lake we stop at Fort Resolution, a centre of the fur trade, and the Indian huts and tepees will be interesting to visit. There is a mission here, with a school for the native children, and the Indians seem quite civilized. The gardens are full



FORT SMITH, H.B.C. TRANSPORT TRAIN.

of thriving vegetables, and farm crops grow well round the fort. After passing the lake, we sail down the river, which is now called the Mackenzie, a stream from one to two miles wide, flowing across plains partly covered with timber and partly with swamps and muskegs. It is joined by another great stream, the Liard, at Fort Simpson, an old post of the Hudson's Bay Company, and also a mission station. We pass Fort Wrigley, and stop at Fort Norman; the country here being more hilly, with spurs running east from the Rocky Mountains. Here another tributary flows in from the east, the Bear River, which is the outlet of the Great Bear Lake. The southern shores of this lake are wooded, but to the north and east it touches on the "barrens."

Below Fort Norman hills press upon the river on both sides, and its bed is narrowed to some 500 yards. Its banks are smooth cliffs of limestone about 300 feet in height; this gorge is known as "The Ramparts." A little beyond this we stop at Fort Hope. Here we have reached the Arctic Circle, the line where on Midsummer Day the sun merely touches the northern horizon at midnight, without setting, and at Midwinter he shows the edge of his disc in the south at noon, but does not wholly rise to view.

We might expect to find here, if anywhere, a dreary and barren landscape, where life would be mere banishment. Yet when we step ashore we find the meadows gay with flowers and the air full of their perfume. Potatoes, turnips, cabbages, and other vegetables are flourishing in the gardens. The summer makes amends for the darkness of winter, and the gardens are now rejoicing in nearly twenty-four hours of sunshine every day! No wonder growth is strong and rapid.

At last, however, we pass beyond the region of fertility, and the low flat islands which fringe the ocean and form the river delta are bare of trees. We make our last halt at Fort Macpherson on the Arctic Red River, but even here we find the valley well wooded. Up to this point we have been passing through an Indian land. Now we meet natives of another race, the Eskimos. Their home is on the sea-coast and the barren grounds.

The Eskimos whom we meet at Fort Macpherson are not in the least like those of whom we have often read. They are tall and well formed, many of the men being over six feet high. They live in comfort, if not in luxury, for many of them are employed by the United States whalers during the summer, and their winter furs find a ready sale at the fort. They are a merry, good-tempered, and friendly folk, more frank and open than the Indians, and honest in all their dealings. Their features are Asiatic in type and remind us a little of the Chinese,



FORT MACPHERSON, THE MOST NORTHERLY H.B.C. POST.

but their skin is almost as white as our own, or would be so if it were washed as often. The children have a good time; the girls play with dolls and the boys with footballs just as boys and girls do at home. They begin their life-work early, however; a boy of eleven or twelve is expected to take part in the hunt like a man.

Let us now glance at that part of the North-West Territories which lies to the west and south-west of Hudson Bay, stretching from the Arctic Ocean to the boundary of Ontario province. It was formerly known as Keewatin. Here we are far

removed from the kindly influences of the Pacific, and we must face the worst climate that our country can show. Road there is none to follow, and the most recent explorations in the northern barrens have been made at the cost of much hardship and danger. There are, however, lakes and rivers in plenty for the summer traveller, and snowy plains for his dog-sledge in winter, and with staunch, wiry Indian and half-breed *voyageurs* one can go far even in the inhospitable barrens.

From the north-east of Lake Athabaska it is not far to the height of land which separates the Mackenzie from the Hudson Bay slope, and this line marks also the change from the wooded to the barren ground. It is not a sudden change. The trees grow smaller and more stunted as one proceeds northwards, except in the low river-valleys, and by-and-by they are found only in the most sheltered places. The ground is a rough plain, covered with mosses and tufts of coarse grass, but even here its summer robe is gay with flowers.

As the traveller fares northwards the plant covering becomes more and more scanty. Firewood is to be found only at rare intervals, and the spirit-kettle must do the work of the camp-fire. This is the summer ground of the caribou, which leaves its winter home in the woods and finds a nourishing food in the mosses. The caribou are often met with in vast flocks, covering the plain for miles, and are so unused to man that one may walk about among them as if they were cattle in a fenced pasture.

The flesh of the caribou is the only food which these plains offer to the traveller, and if he fails to come upon a herd he is in a sore plight. Farther north still is the home of the musk-ox, the most hardy of our large animals. The Eskimo tribes of Hudson Bay travel far inland to hunt the musk-ox, and in the hunting season they may be found two or three hundred miles from the coast. The animal is now rarely found south of Chesterfield Inlet, but in the early days of the fur trade it was hunted as far south as Fort Churchill. Its splendid fur robe is eagerly sought by the traders, and, like the bison of the plains, the musk-ox is being ruthlessly killed out.



ESKIMOS.

The Eskimo is found only on the more northerly coasts of the bay. He is a hunter by sea rather than by land. The musk-ox and caribou draw him inland in their season, but he spends most of his time in the chase of the seal and the walrus. On this coast the Eskimos have little intercourse with white men, unless when they make a journey to Fort Churchill with furs; but here too they are always friendly and cheerful, and are glad to welcome a traveller in their bleak and barren country. To the Eskimos themselves, of course, the country is by no means bleak, nor is the climate severe. They prefer it to the warmth of our southern lands, and except in the Labrador peninsula few of them are ever found south of latitude 60°. Northwards they may be found as far as solid land extends, even to the verge of that Arctic archipelago which reaches within about 500 miles of the Pole.

Of these Arctic islands very little is really known. They form part of our Dominion, and the story of the great explorers who struggled so nobly to find the North-West Passage tells us nearly all that we know about them. We cannot now pause to follow that story, however. Our interest is with the world as the home of men, and few men find a home on these islands. So we end here our survey of the Dominion, and prepare to spread our wings on a new flight, to visit our kindred south of the International Boundary Line.

NORTH AMERICA.—II

The United States

I

WE are now to survey the great country which lies to the south of us, beyond the International boundary. We shall find no visible difference between the south of Canada and the north of the United States. If we were to lose our way in a fog some day when up in a balloon, and come down to earth at a town we had never before visited, we might find it hard to say on which side of the boundary we had landed. Only the flag flying above the schools and public buildings would tell us. The two countries are alike in climate and in productions, in the occupations of their people and in the language which they speak. The difference, as we have already said, lies in their history, their social life and government, and their political aims.

The United States occupies the central part of our continent, from ocean to ocean. Let us glance at the map to remind us of the chief natural features of this area. Beginning at the Atlantic sea-board, we find first a coast strip, narrow towards the north but broadening as we go southwards, till it joins the coastal plain of the Gulf of Mexico. This strip is low and level near the ocean, hordered in many parts with spits of sand inclosing shallow lagoons of sea-water, and broken up by river estuaries of great value for shipping. As we go inland we come to a somewhat sudden rise of level, where a harder

rock crops out. This change of level causes falls and rapids on the rivers, and here, at the head of navigation, we find important cities on all the larger rivers, such as Trenton, Philadelphia, Richmond, and Augusta. Beyond this the surface rises gradually to the ridge of the Appalachian Mountains.



NORTH AMERICA: CHIEF PRODUCTS.

This mountain ridge stretches from Maine to Alabama. In the north it consists of irregular groups and masses; towards the south it is formed of a number of parallel ridges with narrow valleys between. Time was when the only white men in the country were settled on the coastal plain. The Appalachian ridge was a barrier beyond which lay the great unknown west, full of promise but full of fear. As the settlements expanded, the natural passes through the mountains provided

routes of travel and commerce. The Hudson valley, Delaware Bay and River, and Chesapeake Bay with the Susquehanna River, still remain the chief trade-routes from the Atlantic coast.

Beyond the Alleghanies lies the vast Mississippi basin, its level plains extending westwards to the Rocky Mountains. This is a southward continuation of the great prairie region: one can travel from the Arctic Ocean to the Gulf of Mexico without rising more than 1,000 feet above sea-level. The surface rises gradually as we approach the Rocky Mountain ridge, until, as in Alberta, we find ourselves some 3,000 feet above sea-level.

West of the wide plains lies the great mountain region, inclosing a broad area of elevated plateaus, like that which we saw in British Columbia. In the centre lies the Great Basin, where the river-courses run not towards the ocean but into a depression where the Great Salt Lake has its bed. The eastern border of the mountain region consists of the Rocky Mountains; its western consists of the Sierra Nevada, the Cascade Range, and the Coast Ranges of the Pacific. Between the two last ranges lies an important valley which opens towards the ocean through a gap in the Coast Range. This opening, known as the Golden Gate, is the natural site for a great commercial centre, and here we find the city of San Francisco. The Pacific coast is much more elevated than that of the Atlantic, the mountains pressing close upon the sea, and the only important outlets of trade are at San Francisco, the Columbia River, and the Juan de Fuca Strait.

In climate there are parts of the United States which differ much from Canada. The Gulf plain and the southern part of the Atlantic plain have a hot and moist climate, and their products are of a semi-tropical kind; here we find cotton, rice, sugar-cane, and the fruits of hot lands. The western plateau region and the higher plains of the Mississippi basin suffer much from drought. The rainfall is too small for agriculture, and wide areas are little better than deserts. But where irrigation is possible, as in parts of the Great Basin,

the desert may be turned into a smiling garden. We must keep in mind these differences of climate if we are to understand the differences in occupation among the people. The north we shall find very much like our homeland. The south consists of two distinct regions very unlike what we are accustomed to: a hot and rainy region near the Gulf of Mexico, and a hot and dry region in the western plains and plateaus. But we must now pay a series of flying visits to the more important of the states, and learn what we can about them.

II

We will begin our survey on the Atlantic coast, as we did with our own country. Here, bordering on our eastern provinces, lie a group of states called the New England States. Most of their surface is occupied by the ranges and spurs of the Appalachians. Look at the names of places in these states. You will find the same names on the map of England—Boston, Manchester, Gloucester, Cambridge, and Worcester. These names, and the name given to this group of states, remind us of some facts in their early history.

Nearly three hundred years ago a little ship sailed from the town of Plymouth in England, and reached a harbour on the coast of Massachusetts. This ship was the *Mayflower*, and it contained a hundred men and women who, not being allowed in England to worship in the way they thought right, had determined to make their homes in the new and scarcely known land beyond the Atlantic. For nine weeks they had suffered tempest, hunger, and sickness, but their spirits were undaunted; and on 6th September 1620, they stepped ashore on a granite boulder, and giving thanks to God, began to found a settlement, which they called Plymouth.

The winter was a terrible one, and the newcomers did not know how to protect themselves against the cold. Before spring came half the colonists were dead from exposure and want of food. But new colonists arrived, and in spite of great hardships the colony grew, and the Pilgrim Fathers, as

they are called, spread further and further afield. They named their settlements after the places they knew and loved in the far-distant country from which they were now exiled. The descendants of these people are still to be found in New England, and the New Englanders of to-day retain something of the strong religious character of their forefathers.

As the surface of the New England States is rough and rocky, little land being suitable for farming except in the river valleys, the New Englanders have turned their attention to manufactures. The mountains yield marble, granite, slate, and building stone, and the many streams which flow from the



COMMONWEALTH AVENUE, BOSTON.

mountains afford abundant water-power. There are good harbours along the coast. Maine, sometimes called the "Pine-tree State" from the extent of its forests, has an important harbour at Portland, which is connected by the Grand Trunk Railway with Montreal. The coasts are rich in fisheries, and there are several delightful watering-places. Newport, on an island in Narragansett Bay, is a favourite summer resort.

The chief town of the New England States is Boston, the oldest of the large cities, and the second port of the country. It stands at the head of a fine island-studded harbour, on the river Charles. Boston is unlike any other United States city in having narrow and irregular streets, which are said to follow

the tracks made by the cows coming home from pasture in the early days of the colony. In the newer parts of the town the streets are laid out on the usual plan. Boston has a number of fine buildings, and its people pride themselves on being the best-educated citizens of the United States. Cambridge, its suburb, contains Harvard College, the oldest and one of the most important of the universities in the United States. At New Haven, in Connecticut, is the sister university of Yale.

In and near Boston some of the greatest events of United States history have taken place. It was in Boston that the people first rose in revolt against the British Government, which insisted on taxing tea and other articles, without allowing the colonists to be represented in the British Parliament. When ships laden with taxed tea were sent to Boston, a number of young men disguised themselves as Indians, boarded the ships, broke open the chests, and made tea on a large scale by throwing their contents into the water. This riotous act angered the British Parliament, which passed a number of laws intended to punish the colonists. Feeling rose to such a pitch that both sides took up arms, and war broke out. On a narrow peninsula to the north of Boston stands the town of Charlestown, and behind the site of the old village are two small hills, one of which is known as Bunker Hill. On this hill is a tall column reminding us of one of the first fights in that unhappy war, which ended, eight years later, in the separation of the colonies from Britain and the formation of the United States.

III

South of the New England States, and still within the Appalachian region, are a group of states which we may call the Middle Atlantic States. In the state of New York, and in the north of Pennsylvania, the highland region is narrow and is broken by the passes through which the early settlers found their way to the rich plains and valleys of the interior. Most of the busy cities of these states owe their growth to

the fact that they lay on the easiest routes to the new lands of the west. The city of New York owes its greatness, not only to its good harbour and its convenient position with regard to Europe, but to its beautiful river, the Hudson, which forms the only deep-water passage through the highland belt.

New York, the "Empire State," has a fertile soil and much beautiful scenery, especially in the Adirondacks, a range of the Appalachians, covered with forests and dotted with lakes. Deer abound in the woods, and trout in the streams. Many of the villages amongst these pleasant hills have now become well-known summer resorts. New York is the leading state in the Union as regards population, manufactures, commerce, and wealth, and it holds the second place in agriculture.

The chief city of the state is New York, which is the largest and wealthiest city of the world next to London. It stands on a splendid harbour, and is the chief port of entry for goods and immigrants from the Old World. All roads in the United States lead to New York, and here dwell the great bankers, brokers, importers, and railway directors of the country. Within its bounds are nearly five millions of people.

New York was originally built on

(1,580)



NEW YORK FROM THE HARBOUR.

the south end of Manhattan Island, at the mouth of the Hudson, but its population has now spread far out to the north and east. "Greater New York" has actually a land area of 360 square miles. Most of the business of New York, however, is still carried on in the southern part of Manhattan Island. Land is very dear, and buildings of twenty or more storeys, or "sky-scrapers," as they are called, are common. This is a convenient way of finding space for business houses and offices, but it has ruined the appearance of the city.

New York is not all given over to business and bustle, however. One may find peace and quiet in the north end of the city, where the Central Park affords one of the finest open spaces to be seen anywhere. Amongst the handsome streets of this quarter is Fifth Avenue, where the wealthy men of New York live in princely splendour.

Another important city of New York state is Buffalo, a great railway centre on Lake Erie, and one of the busy lake-ports which are found in the west of the state. This city is only twenty-six miles from the Falls of Niagara, which supplies it with electric power to drive its motors. Buffalo is also a great grain centre and an important manufacturing city. In order to reach it from New York, we may follow the old route of the Hudson valley, travelling either by the fine "Empire State Express" train, or by river and canal.

There are few more delightful trips than the sail for one hundred and fifty miles up the picturesque Hudson River from New York to Albany, the capital of the state. For the first twenty miles the western bank of the stream is walled in by a steep and unbroken cliff of volcanic rock known as the Palisades. Forty miles farther on the river enters the highlands, where the scenery is wonderfully beautiful, and passes West Point, the seat of the United States military academy. The river is navigable to the city of Troy, where it is joined by the Erie Canal, which connects the river with Lake Erie at Buffalo. Another canal passes northwards to the beautiful Lake Champlain, which separates the states of New York and Vermont. By means of this lake and the Richelieu River,

which flows out of it to the St. Lawrence, there is a continuous water-way from New York to Montreal.

South of New York, and on the coast plain, are the states of New Jersey and Delaware, famed for their fruit orchards. West of New Jersey, and separated from it by the Delaware River, with its busy shipbuilding yards, is the great state of Pennsylvania, named after William Penn, who founded the colony in 1681.

Pennsylvania is the second state of the Union in wealth and population. Like New York, it extends from the Atlantic to the shores of Lake Erie, and has great variety of surface and of natural products. In the east, on the tidal water of the Delaware River, stands the flourishing city of Philadelphia, the third in population in the United States. Philadelphia means "brotherly love," and the name was given to the place by Penn in the hope that the colonists would dwell together in unity as brethren. At Philadelphia the famous Declaration of Independence was signed in 1776.



CITY HALL, PHILADELPHIA.

Pennsylvania is crossed diagonally by the Appalachian ridge, but there is easy access from east to west by the natural passes of the Delaware and the Susquehanna rivers. West of the highlands lie the Alleghany plains; these are drained by the tributaries of the Ohio River, and thus belong to the Mississippi basin. This part of the state is a great treasure-house of underground wealth. Its coal, both hard and soft, supplies half the Union, and its stores of petroleum and natural gas seem boundless. The great commercial and manufacturing

centre of this district is Pittsburg, which is famous for its production of iron and steel.

South of Pennsylvania, on both sides of Chesapeake Bay, lies the state of Maryland, with a narrow strip of territory extending westwards across the Alleghanies. Maryland received its name from Henrietta Maria, wife of Charles the First of Great Britain, in whose reign it was founded. Chesapeake Bay abounds in herring, and has extensive oyster-beds. Maryland is a fertile state, and much tobacco and corn are grown, while in the western portion are important coal-mines. Baltimore, on Chesapeake Bay, is a fine city, with a great trade in tobacco and flour, and in the canning of fruit and oysters. So many and beautiful are its public buildings that it has been called "the monumental city." It has many fine schools, and the Johns Hopkins University, which is one of the chief places of learning in the country.

Next in order as we go south comes the state of Virginia, named after Elizabeth, the Virgin Queen, in whose reign it was founded. Virginia was the cradle and the grave of British rule in what is now the United States. It was here that Sir Walter Raleigh and Sir Humphrey Gilbert first made an English settlement in 1585, and it was at Yorktown, on Chesapeake Bay, in the year 1781, that Lord Cornwallis, the British commander, surrendered to Washington, the United States general.

The eastern part of Virginia belongs to the Atlantic plain, while the west is occupied by the Blue Mountains and other ridges of the Appalachian system. In the mountain region there are mines of coal, iron, and copper: on the lower ground are fertile farms, and plantations of "Virginia leaf" tobacco without number. Richmond, on the James River, manufactures tobacco, and Norfolk has a fine harbour and a naval arsenal. In a valley west of the Blue Ridge there are many wonderful caves in the limestone rock, with enormous icicles, as it were, of limestone hanging from their roofs. Near at hand is the Natural Bridge, an arch of limestone, two hundred feet above the bed of a small river.

West Virginia lies to the west of the Appalachian belt, and

is a rich and varied state, with extensive forests and wide grazing grounds on its eastern highlands, and good farming land towards the west. Coal, petroleum, and natural gas abound in certain parts of the state. Where the river Potomac breaks through the Blue Ridge stands Harper's Ferry, which is a place of great interest to those who read United States history. At Harper's Ferry lived John Brown, a life-long and bitter enemy of slavery. One Sunday night, in October 1859, he and twenty followers seized the armoury at Harper's Ferry, and freed a number of slaves. After a fierce fight he was cap-



THE CAPITOL, WASHINGTON.

tured, tried, and hanged. During the Civil War the soldiers of the North sang as they tramped along:

"John Brown's body lies mouldering in the grave,
But his soul goes marching on."

On the left bank of the River Potomac is the Federal District of Columbia, occupying an area of sixty square miles. This ground was given up by the state of Maryland to the Federal Government as a site for the Federal capital. Washington, the capital of the United States, is a noble city, all aspects worthy of the nation's greatness. The chief building is the Capitol, a splendid structure with a great white dome, on the top of which is a figure of the Goddess of Liberty. A beautiful park surrounds the Capitol, and everywhere in Washington one sees fresh turf and green trees. Another famous building

is the White House, where the President resides. It is a plain stone building, but the greatest ambition a United States boy can cherish is to occupy it some day as President. The Capitol is the meeting-place of the Congress or Parliament, which makes laws for the government of the United States as a whole, just as the Dominion Parliament in Ottawa does for Canada.

IV

The Upper Mississippi crosses a region of wide, gently-rolling prairies, which stretches from Ohio to Nebraska, and from the International boundary to the Missouri. Formerly this region was the haunt of the buffalo and the paradise of the hunter. Now it is a land of vast corn-fields, and deserves the title "Granary of the United States." As we journey over these plains, we are at first reminded of the rich farming land in Southern Ontario, and as we move towards the west the country reminds us still more of our great western prairies.

We will first visit a group of half-a-dozen important states in the region lying between the Virginias and the Mississippi—Kentucky, Ohio, Michigan, Indiana, Illinois, and Wisconsin. All these except the first border on the Great Lakes, but the greater part of their area belongs to the Mississippi basin. This North Central group of states, together with the Middle Atlantic group we have just described, contains more than half of the population of the Union. The fertile soil produces vast supplies of grain, and supports great herds of cattle. Cities have sprung up along the lake shores, and on the main lines of rail and river communication.

Kentucky lies south of the Ohio, and its surface, sloping from the Cumberland mountains to the river, is the only hilly part of this area. The limestone rock of this region has in some places been dissolved away by water, forming many curious hollows and caves. The Mammoth Cave is one of the sights of the world. It stretches for over a dozen miles underground, with many chambers, winding passages, lakes and

rivers. The soil above this limestone rock is very fertile, and forms the famous "blue-grass region," noted for the fine horses and cattle which are fed on its pastures. Tobacco is a favourite crop with Kentucky farmers, and the state produces one half of all the tobacco which is raised in the Union.

North of the Ohio River, in the state of Ohio, we find a continuation of the rich soil of western Pennsylvania, rich not only in its crops of grain and tobacco, its fruits and its pastures, but rich also in the stores of coal and oil which lie beneath. By way of the Great Lakes cargoes of iron ore from the Lake Superior district are brought by water to meet the coal of Ohio, and are landed at Cleveland, on Lake Erie, one of the busiest of cities. It has many furnaces for turning the iron ore into steel, and factories for turning the steel into all kinds of machines and tools. Cincinnati, on the Ohio River, is a great centre of inland traffic by rail and by river, and has long been famous as a meat-packing town, though it has many other manufactures as well.

West of Ohio, the state of Indiana stretches from the Ohio River to Lake Michigan. Its surface is flat, especially in the north, and continues the great "grain belt," though there are considerable stretches of forest both in the north and the south. Indiana is chiefly a farming state, but has considerable fields of coal and petroleum.

Between Indiana and the Mississippi lies Illinois, one of the most important of the states. It is a prairie state and produces large quantities of grain and cattle. It has also extensive coal-fields, and to its coasts on Lake Michigan come ship-loads of ore from Lake Superior. On the shore of Lake Michigan stands Chicago, the second city of the United States. No city in the world has grown more rapidly. In 1830 it was a mere military post with twelve houses; in the threescore years and ten of a man's lifetime it has grown to be a city of eternal bustle, one of the greatest markets in the whole world for cattle, grain, and lumber—a place "which feeds the East and furnishes the West."

Chicago is the greatest railway centre in the world. Dozens

of railway lines enter the city, and in many places cross each other's tracks on the level. The noise of trains and the whistling of engines never cease day or night. Truck-loads of hogs and cattle are continually poured into the city, and turned out of it neatly packed in cans! Grain is collected in its high elevators, and is poured into steamships, which carry it to the lower lake-ports, on the way to Europe.

Further north on the shore of the lake is another great port and manufacturing centre—Milwaukee, the chief town



STOCK-YARDS, CHICAGO.

in the state of Wisconsin. This state contains good agricultural land, some of the best being found in the beds of shallow lakes from which the water has been drained away. In the north of the state there are extensive forests, and as we approach the shores of Lake Superior we come upon ranges of hills where iron ore is mined.

The remainder of this area—the great peninsula between Lakes Huron and Michigan, and the smaller one between Michigan and Superior—belongs to the state of Michigan. The southern part of this state consists of level and fertile

soil; the north is of quite a different character. The great pine forests, though rapidly becoming smaller, still supply a large share of the United States lumber trade. The iron and copper ore of the Lake Superior district is one of the chief sources of supply for the metal manufactures of the Union, and hundreds of ship-loads pass through the Soo Canal every season on their way to the furnaces and factories which we have seen on the great coal-fields.

In Michigan state are two of the chief crossing-places of trade with Canada. We have already glanced at these in our tour through Ontario. In the north is the city of Sault Ste. Marie, where the Canadian Pacific Railway crosses the St. Mary's River. In the south is the busy city of Detroit, on the river of the same name, where the trains of the Michigan Central Railway pass under the river by means of a tunnel. There is a third crossing where the St. Clair River leaves Lake Huron; here the trains of the Grand Trunk system pass through another tunnel from Ontario into Michigan.

V

West of the Mississippi the prairie extends to the Rocky Mountains. There is, as in Canada, a gradual rise in level towards the west, and when we have passed the lower course of the Missouri, we find ourselves in the region of the great plains, which reach a height of from two to three thousand feet. The area between the great plains and the Mississippi contains seven states, of which three—Minnesota, Iowa, and Missouri—border on the Mississippi, while four—North Dakota, South Dakota, Nebraska, and Kansas—lie beyond the Missouri in the region of the plains. These are mostly prairie states. The north-east of Minnesota is partly forest, being a continuation southwards of our "New Ontario" region. The north-west of this state and part of North Dakota belong to the low and fertile Red River valley, which, as we have seen, forms so rich a wheat-bearing soil in Manitoba.

The higher prairies of Saskatchewan and Alberta are con-

tinued southwards through the two Dakotas, but with a diminishing fertility caused by a smaller rainfall. West of the Missouri lies the "bad lands," on the slope of the Black Hills, where the rivers have cut deep courses into the soft rock. The remainder of this plain region is chiefly used as pasturage for immense flocks of sheep and herds of cattle. The population is scanty on these plains, and even on the farm lands of the lower prairie. Hundreds of farmers are now leaving these districts and crossing the boundary into Canada, where they find a more fertile soil, and less danger of drought ruining their crops. Our new prairie provinces are thus gaining every year thousands of settlers who will enrich Canada with their skill and experience no less than with the stock and money which they bring.

Before our trans-continental railway was opened, the best route to Winnipeg and the west lay through Minnesota, from the twin cities of St. Paul and Minneapolis to the Red River. In the early days of the fur trade hundreds of Red River carts brought the year's furs southwards from Fort Garry by this route to meet the railway system of the United States. These cities still remain important centres of traffic, while a vast trade in wheat and flour has sprung up from the conquest of the prairie by the plough.

The chief towns in these states are built on the rivers which formed the original trade routes, and the largest of these, St. Louis, stands at the junction of the two great rivers, the Mississippi and the Missouri. St. Louis is the fourth city in the Union, and its public buildings are worthy of its rank. Originally a river-port, it is now a leading railway centre as well, and has a great variety of manufactures. East St. Louis, on the east bank of the Mississippi, is in Illinois, and is joined to St. Louis by fine bridges.

VI

We will now return to the Atlantic coast again, to survey the southern part of the United States. The coastal plain which fronts the Atlantic, as we already know, gradually

widens out and sweeps round the south end of the Alleghanies to the Gulf of Mexico. In the southern part of this great plain lie the cotton-growing states, which produce four times as much cotton as all the other countries of the world. The coast plains are everywhere flat and marshy. They are really new land, which has been lifted above sea-level in recent ages. In many places they are covered with vast forests which yield valuable lumber, and some of the trees produce what merchants call "naval stores"—tar, pitch, turpentine, and resin. Most of the people live in the country or in small villages, and even the chief cities are only of moderate size.

This southern coastal plain has been a cause of much trouble to the United States. Up to 1790 the states south of Virginia contented themselves with the production of "naval stores," lumber, rice, and indigo. Year after year, however, the indigo plants were destroyed by insects, and the planters looked about for a new crop. They chose cotton, and by 1795 they were exporting annually six million pounds of this new staple. Cotton-planting became very profitable, but white people could not work in the moist fields under the hot sun, and so negro slaves were imported from the west coast of Africa. Slavery thus became firmly founded in the southern states. "Better that the plain should never have grown a pound of cotton, better that its fertile soil should never have emerged from the waters of the sea, than that slavery and its direful, long-lasting consequences should have come upon the United States."

Though some millions of slaves were employed in raising the cotton crops, few people saw anything wrong in slavery. Many of the planters treated their bondsmen kindly, and they believed negro labour to be necessary if the plantations were to be worked. In the year 1831, however, earnest men in the northern states began to preach the duty of freeing the slaves, and for thirty years the question was bitterly debated, until an intense hatred sprang up between the people of the North and those of the South.

In 1860 Abraham Lincoln, a hater of slavery from his youth up, was elected President of the United States, and then the slave-owners of the South decided to cut themselves adrift from the Union, and make the Southern States an independent country. Thus the Northerners would not allow, and a terrible war broke out, which resulted in 1864 in the complete victory of the North. The Union was saved, and slavery was abolished in the whole of the United States. But though now called a free citizen, the negro is still an alien in race, and in many of the states the feeling is very bitter



UNLOADING COTTON FROM A RIVER STEAMER, NEW ORLEANS.

between black and white. The position of the negro is one of the most difficult problems which our neighbours have to face, and it is a heavy price to pay for the cheap labour supply of the early slave-holding days.

From north-east to south-west, the "cotton belt" of the United States covers two thousand miles, and several millions of men, women, and children are engaged in tilling the fields and gathering the crops. The states in this section, east of the Mississippi, are North and South Carolina and Georgia on the Atlantic coast, Florida bordering the Atlantic on the east and the

gulf on the south and west, Alabama and Mississippi with a short coast-line on the gulf, and Tennessee to the north. West of the Mississippi are Louisiana (part of which, however, lies east of the river) and Arkansas, with Oklahoma stretching westwards to the high plains, and in the south the vast state of Texas.

New Orleans, in Louisiana, near the mouth of the Mississippi, is the largest cotton market and cotton port of America. It is a very busy place, and is the southern gateway of the vast Mississippi valley behind it. Along its winding harbour front the wharves are crowded with the produce of the valley —with sugar, molasses, rice, tobacco, Indian corn, wheat, oats, and flour, and many other things, but above all with cotton. "Cotton is king" in New Orleans, and nearly one fourth of the world's entire supply passes through the port. A short distance from the bustling centre of the city are beautiful suburbs, with villas and cottages shaded by forest and fruit trees, fragrant with flowers, and gay with the songs of birds. Mobile, at the head of a bay into which the Alabama River runs, is the chief cotton and lumber port to the east of the Mississippi. Galveston, the chief port of Texas, stands on a low, sandy island, where the currents from an inclosed bay have scoured out a navigable channel. It also is an important cotton-shipping port, and its harbour is the best in the state.

Cotton is not the only product of this southern coastal plain. The beautiful state of North Carolina, for example, grows tobacco, and is rich in minerals; while South Carolina, where the palmetto or cabbage-tree grows abundantly, has rice-fields, marble quarries, and deposits of phosphate of lime. Charleston, its port and chief city, is one of the historic cities of the United States. The Civil War began in 1861 by an attack on Fort Sumter in Charleston harbour. The place held out gallantly for seven months, but the South was exhausted, and it was forced to yield. Four years later the tattered flag which had been pulled down floated again on Fort Sumter, as a sign that the North had gained the day.

The heavily-wooded state of Georgia grows rice, cereals,

and fruit, which are exported from "the forest city," Savannah, a beautiful town, with cheerful houses sheltering between tall pines, sycamores, oaks, and magnolias, with here and there a palmetto or a cypress tree. The famous "sea-island cotton" is grown on the many little islands which form a picturesque chain along the coasts. Because of its long glossy fibres, this cotton commands the best price in the British market.

Florida is a low peninsula, covered with vegetation, and full of marshes and warm muddy streams, in which alligators disport themselves. It is nowhere more than a few hundred feet above sea-level. The southern portion of the state, known as the Everglades, is a marshy tract, in parts covered with saw-grass, which grows to the length of a fishing-rod, and has an edge like barbed wire. The shores of Florida are bordered by mangrove swamps, and the northern part is famous for its orange groves. The forest wealth is most important, cedar being largely exported for making lead pencils. St. Augustine, on the east coast, was founded by the Spaniards in 1565, and is the oldest city of the United States. It is one of the chief resorts of the invalids who flock to Florida to enjoy the delightful winter climate.

Alabama, in addition to its cotton plantations, has wide stretches of grass land, on which large herds of cattle find excellent pasturage; and Louisiana grows almost all the sugarcane raised in America. Tennessee has coal and iron mines in the Alleghanies, which cross the east of the state; and contains Memphis, a great cotton centre on the Mississippi.

Texas, the home of the "cow-boy," is by far the largest state of the Union, and besides vast cattle ranches, has mines of coal and iron in the mountainous district of the east. Nearly a quarter of the cotton grown in the United States is produced in Texas.

The well-watered and timbered state of Arkansas also devotes itself largely to cotton, but has stores of mineral wealth which are as yet unworked. On the higher lands are valuable forests, most of which stand in swamps. The

inhabitants of the "pincy woods" of central Arkansas are shiftless, ignorant, badly housed and poorly fed, and are, perhaps, the most backward people in the whole of the United States.

To the west of Arkansas is the state of Oklahoma, a great tract of rolling prairie which was originally set apart as the abode of the Indian tribes, but these have now almost vanished. Out of this Indian Territory the state of Oklahoma was carved in 1890. It is a beautiful country, well suited for farming and ranching, and has already made good progress.

VII

The hundredth meridian, the line which marks 100 degrees of longitude west of Greenwich, passes through the west of Manitoba, and traverses the United States nearly midway between the two great oceans. West of this line the soil does not receive sufficient rainfall to make farming successful. The prevailing winds blow from the south-west and south, and they lose their moisture before they reach the wide plains and highland region of the west. Much of the country west of the hundredth meridian is so dry that few trees and food plants can thrive, and the land must be irrigated before it can be farmed. The states which occupy this dry and elevated area are Montana, Wyoming, Colorado, and New Mexico in the east, and Idaho, Nevada, and Arizona in the west, with Utah in the centre.

A vast part of this western region, stretching from beyond the Mississippi to the Rocky Mountains, and occupying the four states first named, consists, as we have said, of the Great Plains, which roll to the horizon in broad waves of country, here and there crossed by ranges of low hills. This region was once considered a desert, but now it feeds great herds of cattle, which are sent in tens of thousands to the eastern markets. The chief vegetation is a coarse grass known as bunch grass, which, coarse as it is, makes excellent food for cattle.

These Great Plains are walled in on the east by the Rockies,

and beyond this ridge lies the Plateau Region, which we have already mentioned. The most striking of these plateaus is that in which the river Colorado flows. A traveller thus describes this part of the country: "The landscape everywhere away from the river is of rock—cliffs of rock, tables of



COLORADO CANYON.

rock, plateaus of rock, terraces of rock, crags of rock in ten thousand strangely-carved forms. There are rocks everywhere—no vegetation, and no soil, but a whole land of naked rock, with giant forms carved on it, sometimes hundreds or thousands of feet in height, all highly coloured—buff-gray, red, brown, or chocolate."

The Colorado River flows through this wild region in a canyon which is one of the wonders of the world. The canyon is more than two hundred miles long, and its banks are in some places over a mile in height. In dark and sombre depths, between grand grim walls which cannot be scaled, the mad waters, which through the ages have thus carved out this wonderful valley, leap on their seaward way with a deafening roar. Everywhere there are side gulches, with their walls cut into vast ledges, like gigantic book-shelves. This wonderful region is almost deserted, except for a few



DENVER.

tribes of Indians. It was not always deserted, as the many abandoned stone dwellings prove. These are to be found in shallow caves under overhanging cliffs, or on the *mesas* or flat-topped mountains, where in some cases they can only be reached by ladders.

To the north-west of the Grand Canyon lies a great basin, which is completely shut in by mountains, and has no outlet to the sea. The streams either lose themselves in the thirsty soil or flow into salt lakes. The most important of these inland seas is Great Salt Lake, which was formerly of still greater extent. Near the lake stands the beautiful Salt Lake



SUGAR PLANTATION

City, with broad, tree-shaded streets. It was founded by the Mormons in 1848, under their leader, Brigham Young. By means of an excellent system of irrigation works, the barren district in which they settled has been made very fertile. Most of the valleys in this region, however, are utter deserts.

North of this basin is the level and treeless Columbia plateau, which is drained by the Columbia River and its tributaries. One of them, the Snake River, has in its course the magnificent Shoshone Falls, which are second only to Niagara in grandeur. Near the Rocky Mountains there is a plentiful rainfall; storage reservoirs have been made on the slopes of the mountains to receive the waters of the melting snows, and thousands of canals and ditches convey life-giving streams to the parched fields on the plains.

In all of these Plateau states minerals abound, and in several of them mining for gold and silver is the chief work of the people. Gold is often found in fine grains, mixed with sand and gravel, at the bottom of the streams; but most of the gold and all the silver are mined from veins found in the rocks deep down under the ground. Nevada was once the richest silver-mining state, but Colorado and Montana now produce the largest part of the silver used in the world. Virginia City, the chief mining town of Nevada, stands above the famous Comstock Lode, from which millions of dollars' worth of gold and silver have been taken.

Montana, in addition to its rich silver lodes, has vast copper mines. Many of its mining camps amidst the mountains are far from towns and railways. All the supplies for these camps—food, blankets, stoves, and tools—have to be carried over steep mountain trails on the backs of donkeys.

Denver, the largest city of the Plateau region, stands at the foot of the Rocky Mountains in Colorado. At first it was a mere station on the overland stage-coach road, but it became more important when gold was discovered in the state. Twelve lines of railway now enter the city, which is the distributing centre for one of the largest and richest mining districts of the world.

VIII

Between the Plateau region and the Pacific Ocean lie the three Pacific states, Washington, Oregon, and California. Their surface is occupied by the lofty Sierra Nevada of California, the Cascade Mountains of Oregon and Washington, and several smaller Coast Ranges. The Sierra Nevada, with its great granite peak of Mount Whitney, slopes gently to the west, and contains a number of fine valleys. Through one of these the Pitt River finds its way to the Sacramento, which flows parallel to the coast for a hundred miles or more before entering the sea. Another of these valleys is the famous Yosemite Valley.

The Cascade Range, to the north of the Sierra Nevada, is full of volcanic peaks, with heavy snow-fields and glaciers. Mount Rainier, the chief height, is the solitary cone of an old volcano; and within sight of it is Mount Shasta, another imposing and snow-clad peak. The Columbia River breaks through the Cascade Range, and forms the only natural route through these mountains. Before it reaches the Pacific Ocean, however, the Coast Ranges also must be crossed. A broad valley lies between the two ranges of mountains, and in this valley are the chief settlements. To the north, in the state of Washington, the Coast Ranges and the Cascade Range almost meet.

The valley-plain of California was first settled by Spaniards, who have left their traces in old mission churches and in the names of places, such as Sacramento, San Francisco, and Los Angeles. In early days cattle-raising was the chief occupation of the people, but in 1847 gold was found in the Sierra Nevada. At once there was a mad rush of miners, representing all nations and all classes of society. By 1850 ninety thousand persons had reached California. The land was covered with prospectors, and mining towns of wood and canvas sprang up almost in a single night. There was gold everywhere and for everybody. Gold-dust was the money of the state, and when payments were to be made, and no scales were at hand, it

was measured out in handfuls. "Law and order were unknown. Everybody was too busy in getting rich to provide protection for his riches other than that which his revolver and knife afforded him. For a long time he who was quickest with his six-shooter and surest in his aim ruled the camp, and ordered things according to his own will." This state of things only came to an end when the law-abiding citizens joined together to keep order. Fierce fights with the "roughs" took place; many were shot or hanged; and the rest, finding their reign of evil-doing over, fled from the country.

By 1860 the "diggings" were almost worked out, and then men turned to better and surer means of gaining wealth. Farms arose, and California became a great wheat-raising state. Wheat ripens early in the valleys and is harvested in a very rapid way. A machine called a "header" is pushed forward by horses. As it advances it clips off the heads of the wheat, leaving the stalks standing. The heads are caught as they fall on a revolving belt that pours them into a wagon, or sometimes into a threshing-machine. Much of the wheat is shipped to Europe from the ports on San Francisco Bay, and from Tacoma and Seattle on Puget Sound. Fruit, which is grown in almost every part of the Pacific coast, is the chief product of California. Oranges, grapes, and pears grow luxuriantly, and are sent to the eastern states, and even to Europe. Grapes abound, and Californian wine is well known. Apples, plums, and other fruits are canned and exported.

The Pacific states have, for the most part, a very healthy and mild climate, and along the coasts are many winter resorts which rejoice in warm winds while the interior plains are deep in snow. Oregon is famous for its lumber, chiefly of a fir known as the Oregon pine; while pine, cedar, and redwood are obtained from the forests of California. On the western slopes of the Sierra Nevada are the largest trees in the world. Many of these "big trees" are old and hollow, and the interior of one of them actually measured twenty-two feet in diameter. During the salmon season the Columbia River is thick with

fishing-boats. The Columbia River salmon fisheries a few years ago were the largest in the world. Of late years they have yielded less and less, and have now sunk to third rank—Alaska being at the head, and British Columbia second.

The largest city of the Pacific slope is San Francisco, which is built on a sandy peninsula separating the Bay of San Francisco from the ocean. This bay is the only natural harbour along more than fifteen hundred miles of coast; it is really an inland sea with a great trade of its own. The water front of San Francisco is always crowded with craft of all shapes



SAN FRANCISCO.

and sizes. Though San Francisco has a fine situation and one of the grandest Parks in the world, its climate is not pleasant. For six months of the year there are almost constant fogs and rains. There are, however, towns across the bay which are better favoured, and in them most of the merchants of the city reside. San Francisco has a "Chinatown" of its own. In this part of the city live thousands of patient, hard-working "Celestials," who have no intention of making the United States their home, but are busy saving money, in the hope of returning, alive or dead, to the Flowery Land. Much of the city has been rebuilt since 1906, when widespread destruction was caused by an earthquake.

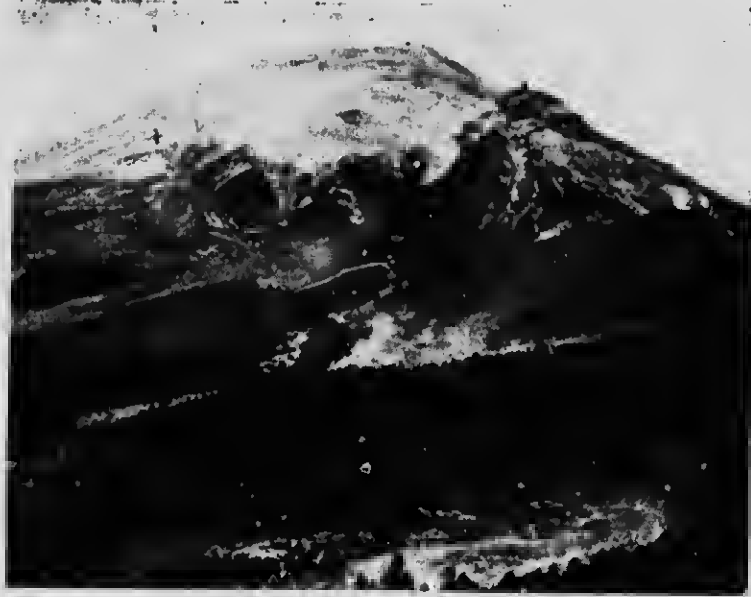
Mexico

SOUTH of the United States lies the republic of Mexico. When the Spaniards, under Cortez, invaded the country in 1521, they found it inhabited by a powerful people known as the Aztecs. They had a regular government; they were farmers, workers in gold and silver, and architects, as their numerous ruins show. Their roads, bridges, and aqueducts would do credit to a modern engineer. The Aztecs were also clever artists, and many of the carvings and paintings with which they adorned their palaces still exist.

The story of the conquest of Mexico by Cortez is too long to tell here, but it should be read by every boy and girl, for it abounds in stirring incidents. For three centuries afterwards the Mexican people were under Spanish rule; then they threw off the foreign yoke. In 1824, after many years of struggle, Mexico became a free republic. Years of misrule followed, and for a time the country came under the sway of France. But in 1867 a republic was again set up, which has lasted to the present time. Though the country has seen much strife and confusion, it has made great advances in prosperity.

Mexico consists chiefly of a broad, high table-land. On the east and west this plateau is flanked by mountains; those of the west appear to link the mountains of North America with the Andes of South America. Mexico is a land of volcanoes. Some of them—such as Citaltepetl or Orizaba, the "Star" Mountain, and Popocatepetl, the "Smoking" Mountain—rise above 17,500 feet, and are clad with perpetual snow. Orizaba is only seventy miles from the Gulf of Mexico, and its snowy summit, like a gigantic sugar-loaf, is often seen from ships two hundred miles away. Popocatepetl, which has not been in eruption since 1540, may be seen to perfection from the town of Mexico. The volcanic mountain of Jorullo, which stands on a plain about one hundred and fifty miles to the westward of the city of Mexico, was thrown up in a single night during the year 1759.

Mexico has few navigable streams, most of the water-channels being rocky ravines in the dry season and roaring torrents in the wet. Everywhere the land is gashed with deep troughs, which are waterless for half the year. The country lies partly within the Tropics, but owing to the elevation of the land there are three distinct zones of climate. The coast plains are moist, hot, and unhealthy, and "Yellow Jack" and other fevers are common. As we



MOUNT POPOCATEPETL.

ascend to the plateaus we reach a region of perpetual spring, where the tropical jungles of the coast give place to masses of evergreen oaks; and higher up still is a dry region of cloudless skies, where the winters are cold, and the pine, spruce, and fir flourish. Above this region are the everlasting snows of the high mountains.

There are two seasons in the year: the rainy season, extending from May or June to October or November, and the dry season for the rest of the year. In the height of the wet season the rain descends in torrents every day, and brings freshness

and vigour to every living thing. The city of Mexico, which stands high on the plateau, has a moderate annual rainfall.

Farming, cattle-raising, and mining chiefly employ the people. Plantations of cotton, sugar-cane, coffee, vanilla, and tobacco flourish in the hot lowlands, where there are also groves of orange trees, bananas, and tall, feathery palms. Coffee is one of the chief products of the country. The forests contain oak, cedar, and many other useful trees, while high on the plateau wheat and Indian corn are grown. Agriculture is in a very backward state; in many places a forked or hooked stick still serves as a ploughshare. The Mexicans rear large herds of sheep and cattle, and export much wool.

The chief wealth of Mexico is found in her rich mines of gold, silver, platinum, copper, lead, iron, mercury, and coal; but half the mines that might yield a rich profit are not worked at all. In the canyons of the Sierra Madre, perched on the ledges of precipice are many mining camps. In some of them the veins of silver are almost vertical, and have to be worked at great depths.

The people of Mexico consist of native Indians, Spaniards, and half-breeds. Most of the Mexican Indians are civilized, hard-working, sober people, with kindly and courteous manners.

The cities of Mexico are mostly built like those of Spain, and have broad, straight streets, and low, flat-roofed houses. Nearly all the towns have a *plaza* or square, and an *alameda* or pleasure-ground, while many of them have also a circus for bull-fights. Mexico, the capital, stands seven thousand feet above the sea-level, and is encircled by still loftier mountains. It enjoys a splendid climate, but is very badly drained, and therefore very unhealthy. The cathedral, which is the finest and largest church in America, stands at the meeting-place of several streets. From one of its towers the eye sweeps over a vast plain of cultivated fields, extending to the very foot of the snowy mountains. Lake Tezcuco, the largest of the six lakes in the hill-girt plain, lies only two and a half miles away. Avenues of elm and poplar radiate in every direc-

tion, and towards the south the whole district seems to be an immense garden of orange, apple, and cherry trees.

Acapulco, on the west coast, has one of the finest harbours in the world. The chief port, however, is Vera Cruz, on the Gulf of Mexico. Its unhealthiness and its exposed harbour handicap it so greatly that it must soon give place to Tampico, three hundred miles farther north. The city of Vera Cruz



CATHEDRAL, MEXICO.

is joined to the capital by railway. Let us make a journey by this line.

We board the train, and soon leave the sandy waste which surrounds the city, and enter a region of tangled trees and shrubs covered with creepers. We stop at pretty little stations, with their buildings embowered in flowers and shaded by banana trees, and then begin the ascent to the high tableland. At Cordoba we find ourselves on the border of a great coffee-growing district. Indian women and children crowd

round the carriage door, and offer us bananas pine-apples, and other fruits at a very cheap rate. Then the train moves on through grove after grove of coffee shrubs with their dark glossy foliage. Now the scenery becomes wilder and wilder, and we catch a glimpse of Orizaba rearing its snow-clad peak to the azure sky. A short run brings us to the town of the same name, nestling at the foot of mountains which have their heads in the clouds.

The scenery now becomes very grand. High above us is the road, winding along the sides of the mountains. Sometimes we run along the bank of a foaming torrent, or skirt a precipice with a river roaring a thousand feet below. Here we cross an iron bridge, arched like a horse-shoe; there we plunge into tunnels and deep rock cuttings; and all the time the grade becomes steeper and steeper. The air now grows chilly, for we are ten thousand feet above the sea-level. Then we gradually descend to the table-land, and speed across dry, dusty stretches of country. The air becomes warm again, almost sultry, and clouds of fine dust invade the carriage. As the sun is sinking we roll into Mexico station, and our journey is at an end. Many parts of the country have as yet no railways, and goods are conveyed from place to place by means of donkeys. The roads are wretched, and only these sure-footed creatures can safely traverse them.

Central America

CENTRAL AMERICA, the land-bridge between North and South America, is very mountainous, and the lofty cones of many volcanoes fringe the Pacific coast. In the neighbourhood of these volcanoes earthquakes are so common that the houses are slightly built, and are rarely more than one storey high. Much of the fertile soil is composed of a volcanic dust which has been thrown out of the volcanoes in ages past.

Plant life and animal life flourish in Central America. On the Atlantic side, where the rainfall is greatest, there are grand forests, exceedingly rich in mahogany, logwood, and india-rubber, as well as in palms, tree-ferns, and orchids. On the high mountains oaks, alders, pines, and cypresses are found. Most of the people live by agriculture, though on the dry regions of the central savannahs vast herds of cattle are reared. Indian corn and beans are the chief crops, and they flourish almost everywhere. In the warm moist coast lands cacao, tobacco, sugar-cane, cotton, and rice are produced, and in the warm dry lands indigo. Coffee of a very high quality is largely exported.

The most northerly of the states of Central America is Guatemala, with a coast of mangrove swamps, backed by vast forests. Farther inland are high plateaus, and then a lofty mountain chain, with many extinct volcanoes, the highest being nearly fourteen thousand feet high. Between this range and the Pacific is a narrow coast plain. The chief city is Guatemala, which has a cathedral and a university.

San Salvador, on the Pacific coast, though the smallest of the republics, has a greater population than any of the others. Nowhere are there more volcanoes than in its unexplored mountain ridge. One of these, Izalco, has been continually in eruption for more than a hundred years. "Balsam of Peru" grows on the coast plain, and nowhere else. There are rich veins of silver and iron ore, but they are not much worked. The capital, which bears the same name as the republic, stands in the midst of a fertile plain at the foot of an extinct volcano, and not far from its port, Libertad.

Honduras, which lies to the north of Costa Rica, has a long stretch of coast-line on the Bay of Honduras, and a narrow strip on the Pacific coast, where Fonseca Bay forms a noble harbour. Columbus discovered the country in 1502, and paved the way for Spanish settlements on the coast. Early in the seventeenth century, English buccaneers or pirates formed wood-cutting camps in the dense forests and strongholds on the innumerable "keys" or islands which line the

coasts. They frequently attacked Spanish treasure-ships, and sometimes even swooped down and sacked cities. Buccaneers, however, with its cruelties and its lawlessness, has long been put down. In 1783 the British took possession of what is now called British Honduras, lying to the east of Guatemala. The chief wealth of both Honduras and British Honduras lies in their forests and plantations of sugar-cane and bananas. Mahogany and logwood trees are felled in the interior, and are floated in rafts down to the coast.

Nicaragua, the largest of the republics, possesses a great alluvial plain along the Atlantic coast, and behind that broad highlands occupied by rich pastures, which support great herds of cattle. On the lowlands coffee and sugar are grown in vast quantities. One of the most important features of the country is Lake Nicaragua, which is a hundred and twenty miles long and thirty-five miles broad, and lies within a few miles of the Pacific coast. Its surplus waters are carried to the Caribbean Sea by the River San Juan. North of Lake Nicaragua is the smaller lake of Managua. Nature has thus made a partial water-way across the isthmus, and it has often been proposed to complete it by a canal.

Costa Rica, or the "Rich Coast," a small republic, lies to the south of Nicaragua, which it resembles in surface and in products.

The narrowest part of Central America, the isthmus of Panama, formerly belonged to the republic of Colombia, in South America, but is now an independent state, known as Panama. Though small in size, this is a very important state, as across it lies the shortest route from the Atlantic to the Pacific.

The Panama Railway, which is some forty miles long, unites the harbour of Colon, or Aspinwall, on the Caribbean Sea, with the important seaport of Panama on the Pacific. Aspinwall is a busy place, which has grown up rapidly, and is connected with the rest of the world by seven or eight lines of steamships. Parallel to the railway runs the Panama Canal,

which, when finished, will allow the largest steamers to pass freely from the Atlantic to the Pacific. This canal was begun by a French company in 1881; but the work proved most difficult, and after millions of dollars had been spent upon it they gave up the task. The United States has undertaken to complete it, however, and the canal will probably be finished within the next few years. The canal will then be one of the world's great trade routes, and its opening will have important effects upon shipping and commerce.

Panama is an old Spanish city, built on a narrow peninsula jutting into the Bay of Panama. It is a picturesque place,



PANAMA.

the chief objects of interest being the old fort, with walls twenty-five feet thick; and the cathedral, which has an edging of oyster shells round the eupolas of its towers. The town is a Babel of many peoples and many tongues.

The West Indies

THE first land in the New World which Columbus discovered was one of the Bahamas, a group of islands which lies off the east coast of Florida. He did not linger among the fairy isles of this beautiful coral group, but passed

on to find himself in the midst of a long chain of islands, which he called the West Indies. He visited one island after another, and took possession of them all in the name of Spain. Settlements were afterwards formed, and in time most of the islands owned the lordship of Spain. During the wars which broke out in Europe in the seventeenth and eighteenth centuries several of the islands were taken from her; and in the Spanish-American war of 1898 she lost Cuba and Porto Rico, the only two possessions left to her in the West Indies.

The West Indies consist of thousands of islands, varying in size from Cuba, which is twice as large as Nova Scotia, to tiny little islets just peeping above the waves. Some of these islands were once part of the continent, others have been formed by volcanoes, while many have been built up by coral polyps. The islands, for the most part, are very beautiful. Richly clothed with evergreen forests, they rise out of the sparkling waters, gleaming like ocean gems in the sunshine. Many of the islands are fertile; some of them have the richest soil known. All tropical fruits and vegetables—such as sugar, coffee, ginger, logwood, and cacao—grow freely. The islands are linked together by telegraph cables, and there are several lines of steamers running to the United States and to Europe.

Denmark, France, Holland, and the United States possess colonies in the West Indies, but the larger number of the islands belong to Britain. The Bahama group, which extends from the Gulf of Florida towards Cuba, and consists of some three thousand low coral islets, rocks, and banks, is British. Many of the islands are barren wastes, rising only a few feet above the sea, and are pierced by far-spreading salt lagoons. About twenty are inhabited, and three fourths of the people are negroes, whose forefathers were brought as slaves to the islands. They occupy themselves in sponge-fishing, making salt in the lagoons, and growing the agave, from which sisal hemp is obtained. The only important town is Nassau, on the island of New Providence.

Jamaica, the third largest of the West Indian Islands, and

The West Indies

once a Spanish colony, has belonged to Britain since 1655. Its name—which means “a land of wood and water”—well describes it; for it is very fertile, and from its central mountains at least seventy streams descend to the northern and southern shores. The forests supply valuable woods, drugs, spices, and dye-stuffs; all kinds of fruit grow splendidly; and its coffee fetches the highest price in the London market. The sugar plantations were once famous; but they have now dwindled greatly, and the sugar industry is only a tithe of



KINGSTON, JAMAICA, ON A HOLIDAY.

what it was when slave labour was used to till the soil. Bananas, which are grown and exported in millions, now form the chief product of the island. The capital, Kingston, situated on a good harbour in the south-east of the island, suffered much from an earthquake in 1907.

The West Indies lie in the region of the north-east trade-wind; but while the lands lying farthest eastward feel its full strength, those towards the west are partly sheltered.

The outer group, therefore, is commonly known as the Windward Islands, and the inner one as the Leeward Islands. The British colony known by this name, however, is merely the northern portion of the Windward group.

Amongst the Windward Islands is St. Lucia, with its steaming volcano and magnificent peaks. It is very fertile and beautiful, and its harbour of Castries, now a British naval station, is one of the finest in all the West Indies. Barbados, which its white inhabitants delight to call "Little England," is the most "windward" of all the islands, and is often swept by fearful hurricanes.

Trinidad and Tobago, the southernmost islands of the West Indian chain, also belong to Britain. One of the most curious features of Trinidad is a lake of pitch, situated in the south-west of the island. The old buccaneers were the first to find this natural pitch-pot, and they made use of its contents in caulking their ships. Now thousands of tons of pitch are dug out of it every year, and, in a boiling-house near at hand, are turned into asphalt, which is used for making pavements. The climate is hot and damp, but not disagreeable, and the soil is rich. The capital is Port of Spain, which stands in the north-west, with mangrove swamps in front and green hills behind.

Tobago, about twenty miles to the north-east of Trinidad, is the healthiest island of the West Indies. It is volcanic in character, and has many conical hills and long ridges. It exports sugar, cocoa-nuts, and live stock from the little town of Scarborough, on the south coast.

The largest and richest of the West Indian islands is Cuba, "the Pearl of the Antilles," which is almost equal in area to all the rest of the islands together. It is wonderfully fertile, though only one tenth of its soil is as yet cultivated. There are mountains in the east, high plains in the centre, and mountains again in the west. Most of the coast is steep, and is fringed by coral reefs, but there are many fine land-locked harbours.

Cuba has millions of acres of virgin forest, where palms,

pinus, logwood, mahogany, and cedar grow abundantly. The royal palm is common all over the island, and is known as "the blessed tree," because of its great use to man. Cuba grows much sugar, and she has, besides, plantations of tobacco, coffee, bananas, Indian corn, oranges, and pine-apples. Tobacco, which grows well throughout the island, comes second to sugar in importance. In Havana, the capital, the best cigars are made, and from its quays bales of fine tobacco are sent to the United States. Horses are bred on the fertile grazing lands; and some rich mines, especially of iron ore, are worked. The Cubans are chiefly descended from the early Spanish settlers, though more than a quarter of the population is black. The Spanish language is generally spoken. This island was taken from Spain by the United States in 1899, and two years later was granted self-government as a republic.

Haiti, the large island to the east of Cuba, was once a French possession; but the negroes rose, drove out their masters, and set up a republic, under which no white man is allowed to own an inch of land. This splendid island, which needs only good government to make it one of the most productive lands on earth, is now divided between two negro republics. The more important, although the smaller, is the republic of Haiti, in the west, while Santo Domingo occupies the east. Nearly all the people in the latter state are negroes and half-breeds, and they all speak Spanish. French is spoken in Haiti. There are but few white people, and they are not allowed the full rights of citizens. It is the land where black rules white, and is also the worst governed country in the world.

Porto Rico, which lies to the east of the island of Haiti, is very mountainous, and has vast forests of large trees. On the coastal plain, sugar, coffee, tobacco, cacao, and cotton are largely grown. The plantations are chiefly owned by Creoles—that is, by natives who claim descent from European ancestors. Porto Rico became United States territory at the close of the Spanish-American War of 1898.



ON THE AMAZON.

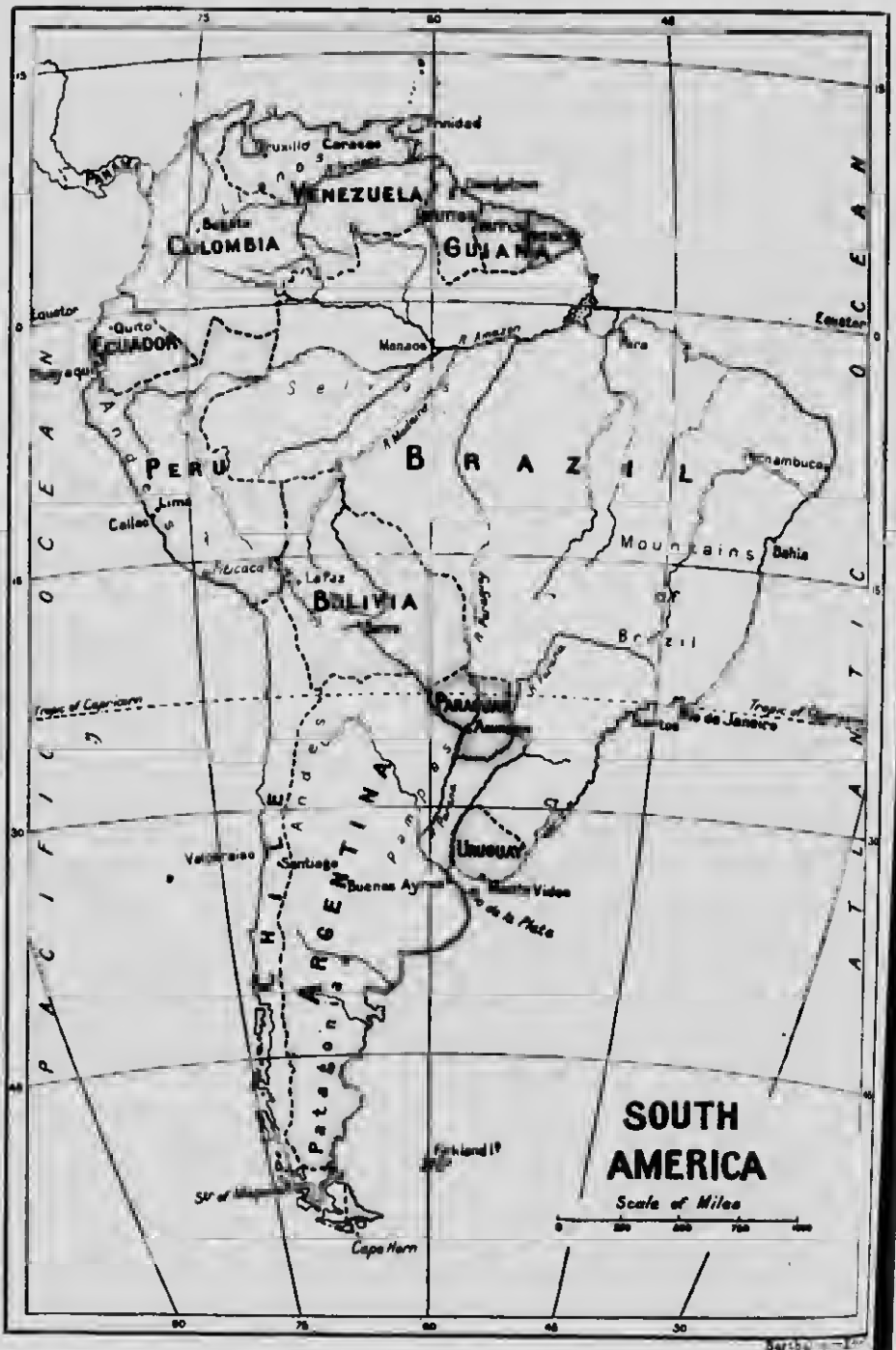
SOUTH AMERICA

1

WE now turn to South America, whose broad outlines we have already briefly examined. Compact in form, with no peninsulas and few islands, except at its southern extremity, it stretches from the land-bridge of Panama to the rugged cliffs where Cape Horn keeps its lonely watch over the wild Antarctic seas. Nature was in her kindest mood when she created North America. She gave her vast and fertile plains easily reached from the sea, mountain ranges that could be easily crossed, rivers that could be easily bridged, and forests that could be easily felled. In addition, she gave her many fine harbours, an abundance of coal and iron, and a temperate, inviting climate.

How different is South America! Her fertile plains, except those of Argentina, are difficult to reach; her vast mountain ranges are difficult to cross; most of her rivers are too rapid for navigation, and her largest ones are too wide to bridge; her forests are hard to reach and hard to work; she has little coal and iron, though much gold and silver; her good harbours are few, and almost all of them are surrounded by rugged mountains; her climate, though in many parts delightful, is unpleasant over wide areas; floods, droughts, volcanic outbursts, and earthquake shocks are common. Man has a hard struggle with Nature in South America.

A bird's-eye view of the continent would show us the Andes, the longest mountain chain of the whole world, sweeping



through
wall,
east v
valley
(1)



RELIEF MAP OF SOUTH AMERICA.

through the whole length of the continent, as a lofty unbroken wall, from the Caribbean Sea to the Land of Fires. In the east we should see a broad highland region, divided by the valley of the Amazon. Between the Andes and these eastern

(1,580)

highlands are the Llanos, or tree-dotted plains of the Orinoco ; the Selvas, or tangled forests of the Amazon valley ; and the Pampas, or wide, treeless tracts of the Paraguay basin.

In their northern parts the Andes are five hundred miles in breadth, and this part of South America is the highest region of the New World. The Andes are massed here in all their grandeur, with a bewildering number of mountain chains and grand snow-capped peaks soaring to the clouds. The Bolivian part of the Andes contains no less than thirty-two summits above seventeen thousand feet in height.

From this centre the Andes stretch out their arms north and south, and on either side they become both narrower and lower, though from time to time giant peaks like Chimborazo and Aconcagua lift themselves to the clouds. No mountain system is so difficult to cross. The height of the passes in the central region makes transit almost impossible except for porters and mules. There are a few railways built across the chain at enormous cost, but Nature seems to have forbidden the interior of South America to trade with its Pacific coast. The highest peak of the Andes is the extinct volcano Aconcagua, in the Argentine republic. It is 23,080 feet in height. The Andes, like the other great ranges of the earth, are formed of rocks which have been crumpled up and folded into mountains by slow movements of the earth's crust, and they are still slowly rising.

South America, as we have seen, is mountain-fringed on east and west. We must now inquire what natural doorways there are in this barrier ring to give access to the interior. There are three only—the rivers Orinoco, Amazon, and La Plata, all of which discharge themselves by means of wide estuaries into the Atlantic. On the Pacific side the steep Andes leave but a narrow coastal plain, most of which is poverty-stricken as far as vegetation is concerned, but rich in mineral wealth.

The Orinoco, the Amazon, and the La Plata between them drain nearly two-thirds of the whole continent, the Amazon alone draining an area equal to two-thirds of Canada. The

basins of the Orinoco and the Amazon have no distinct division between them, and there is actually a natural water-way connecting the two. On the south, again, the tributaries of the Amazon and those of the La Plata flow within four miles of each other. Thus one might make a boating voyage from north to south over the greater part of the continent, as well as from east to west, by its large rivers.

II

The Amazon is by far the most majestic river of the world. Eight of its tributaries are more than a thousand miles long. Its main stream can be navigated for a distance equal to the trans-continental railway journey from Montreal to Vancouver; we might actually sail on its waters from the Atlantic to within two hundred and fifty miles of the Pacific. Recent explorers think the extreme source of the Amazon is in the Nupe River, a branch of the Marañon. The Marañon plunges through a deeply-cleft valley of the Andes in a north-westerly direction, skirting the eastern base of the mountains. Then it makes a great bend to the north-east, and in a mighty flood cuts its way through the hills to pursue its long journey across the continent to the Atlantic. Just below the point where it makes its great bend there are no less than thirty-five cascades, besides whirlpools and rapids, in a distance of as many miles.

Very little is known about the upper course of the Amazon, but we do know that it is navigable for ocean steamers for two thousand three hundred miles from the sea, and that vessels drawing fourteen feet of water may sail four hundred and eighty miles further up the stream. We also know that two thousand miles from the sea it is one and a half miles wide. In some places the river is from four to six miles wide, and often it divides into several channels and a network of side canals, which run for a great distance parallel to the main river. Travellers say that by means of these side channels,

or canoe-paths as the Indians call them, it is possible to go a thousand miles up the Amazon valley without once entering the main stream. In the rainy season the whole country near the river, to the extent of several hundred thousand square miles, is under water. The river discharges such a volume of water into the Atlantic that the sea is discoloured for hundreds of miles from the land, and fresh water from the Amazon may be dipped up from the surface of the sea two hundred miles from its mouth. The estuary is more than three hundred miles wide.

A voyage up the Amazon is usually made from Para, which stands on the southern shore of the estuary, opposite the low



VEGETATION ON THE AMAZON.

island of Marajo. Para is a well-built town, with narrow streets, tramways, and several large public buildings facing a broad *plaza*. Its principal, almost its sole, export is rubber, and one may say that its very existence depends on this valuable product. Para is a busy place, for it has to supply all the river towns of the interior with food and other goods. Half-a-dozen lines of steamers ply on the Amazon, and there are many foreign and native boats to be seen at the wharves.

Let us go on board one of the paddle-steamers which sail up the river for a thousand miles to Manaus, the capital of Amazonas, the largest province of Brazil. The boat has two decks, the upper one covered by a wooden roof. Between the iron posts which support this roof the passengers swing their

hammocks, and usually occupy them night and day, for the tropical sun blazes overhead, and makes people lazy. Everywhere in the Amazon valley the hammock is a couch by day and a bed by night. In a few hours the steamer plunges into the grand and beautiful forest, which stops only at the edge of the water. The thicket is so dense that one cannot see far into its solid mass of green. Trees of every variety are wedged together, all struggling upward for light and air. From tree to tree and limb to limb is a network of soft, rich creepers. Orchids, with their brilliant flowers, are everywhere.

"Some of the largest trees spread above the others a wide, thick roof of verdure, like a vast umbrella. Others have so dense a covering of leaves and creepers that you can hardly see their trunks, while elsewhere a great mass of tall, slim stems crowd so closely together as to resemble a natural picket fence. In some places there are great groves of palm-trees, which look like vast verdant halls with a solid roof of glossy green."

The gigantic *Victoria Regia*, a huge water-lily, is perhaps the most remarkable of all water-plants, and it is found in all the tributaries of the Amazon. Its leaves very often have a diameter of six feet and more, and look like a large tray with an upturned edge. The Indians eat the seeds of the plant, and while gathering them they very often place their children out of harm's way on the great floating leaves.

These forests are crowded with large troops of monkeys, which fill the air with their hoarse cries. Beautiful parrots, magnificent crimson macaws, and brightly-coloured toucans fly from bough to bough; dolphins and sea-cows show their huge backs above the water; while enormous alligators bask in the sun, or swim slowly across the stream. The monarch of the forests, the terrible jaguar, or South American tiger, may also be heard or seen. Huge serpents crawl about, or hang from the branches of the trees, awaiting their prey; and everywhere, darting to and fro, are butterflies of great size and most brilliant colour. No-

where else in the world is there such a wonderful variety of insect life.

The first important trading town which the steamer reaches



SOME SOUTH AMERICAN ANIMALS.

is Santarem, at the mouth of the blue Tapajos, on the southern bank of the main stream. The next port of call is Ohidos, which stands on a rocky bluff with a background of hills. Eight days from Para the mouth of the Rio Negro is reached, where the dark stream of the tributary mingles with the yellow

waters of the Amazon. A few miles beyond is the town of Manaos, with its cathedral standing on a hill in the centre of the city. From this port the steamer returns to Para.

III

We are next to visit the southern part of the great central plain of South America, the vast stretch of country watered by the Parana and its host of tributaries. Instead of the forest plains or *seltas* which border the Amazon, we find the wide treeless plains known as *pampas*. Round the La Plata estuary these pampas are carpeted with rich grass and spangled with beautiful flowers, while trees cluster about the water-courses. Farther inland the trees disappear, and the whole country is one boundless open meadow, stretching as far as the eye can see in every direction, and unbroken by a single hill. The tall, feathery pampas grass which clothes this region sometimes stands nine feet high. Gay flowers and huge thistles lend variety to the sea of green. Nearer the Andes the plains become uneven and broken, and gradually merge into deserts, where little but thorny shrubs will grow; and the land is pitted with salty hollows, which in the rainy season become brackish swamps. In the Argentine Republic one may travel for two thousand miles over these vast level plains. They were at one time covered by the sea. This we know, because gravel and beds of sea-shells are found beneath the surface.

Millions of cattle and horses are reared on these rich pastures, and form the chief wealth of the country. An *estancia*, or ranch, is usually built in the form of a great square, inclosed by a stockade. In front is the corral, into which the cattle are driven when they are "rounded up" for branding, or collected for their final journey to the market. On either side are store-houses and living-rooms. Behind the main buildings are the huts of the *gauchos*, or cow-boys. On the fence in front of the station are a dozen saddles ready for use, for no one on the pampas dreams of going about on foot;

even the beggars in this part of the country do their begging on horseback. The *campo*, or pasture-ground, is often fifteen square miles or more in area, and upon such a space over a thousand head of cattle find plentiful grazing. As far as the eye can reach is a sea of waving gras, dotted here and there with ant-hills, some of which are ten feet high and four in diameter.

Large tracts of pampas are now being turned into farmland, and though a few years ago wheat had to be imported, millions of bushels are now sent away to other lands. Transport is easy, for the pampas are an ideal country for railways.



HUNTINO THE RHEA.

So flat are they that there is little to be done beyond laying down the track. The longest straight stretch of railway in the world is found between Buenos Aires and the foot of the Andes. For a distance of two hundred and eleven miles the line is laid without a single curve, and nowhere is there a cutting or embankment deeper or higher than three feet.

There are few wild animals now to be found on the pampas, and even the Gran Chaco, or "great hunting-ground," where tribes of roving Indians still live by the chase, is becoming settled. The monarch of the pampas is the jaguar. This

creature is spotted like the leopard, but is as fierce as the tiger. It can climb trees and swim rivers, and frequently carries off oxen and bullocks. The puma, or American lion, is more often seen than the jaguar. It is fawn or reddish-brown in colour, and is sometimes nine feet long from the nose to the end of the tail. Horses, sheep, cattle, and dogs fall a prey to it, but it never attacks a man. Indeed it may be tamed in some measure, and a puma has been known to follow its master about like a dog.

Flocks of llamas and alpacas may often be seen. The llama is a gentle creature, some four feet in height, with a long neck and a camel-like head, and is covered with wool like a sheep. It is a useful creature, for it not only yields milk, flesh, wool, and leather, but it sometimes serves as a beast of burden, especially in the Andes, where it frequently carries a load of a hundred pounds. The wool of the alpaca, or dwarf llama, is exported in large quantities, to be worked up into glossy, silk-like cloths.

The largest bird of the pampas is the *rhea* or ostrich, which is often found in a wild state in Patagonia. It is hunted by Indians on horseback, armed with *bolas*, which consist of two or three heavy balls, one at each end of a rope. The Indian gallops after the rhea, and when he gets near it he throws the bolas, so that the rope twists itself round the legs of the bird, and throws it helpless on the ground. On the sterile plain at the foot of the Andes we may occasionally see a condor, or great vulture, sailing above us. These birds pass most of their time high in the air, and only descend to the earth at the call of hunger.

The Republic of Colombia

WE will now make a round of visits to the various countries of this continent. South America is a land of republics. With the exception of British and Dutch Guiana, no part of South America is now under the rule of a king or queen.

The republic of Colombia, named after the discoverer of the New World, is the only country of South America with a sea-coast on both the Atlantic and the Pacific Ocean. The district of Panama, so important as the natural crossing-place of traffic between two oceans, was until recently part of the republic, but is now an independent state.



BOGOTA.

The surface of Colombia is very varied; three lofty mountain chains of the Andes traverse the country, and form valleys in which flow the three navigable rivers of the country. The chief of these is the winding Magdalena, which carries most of the traffic of the country. One of its tributaries, the Cauca, flows through a valley in which sugar-cane, coffee, cacao, and fruits of all kinds grow in the richest profusion. The seeds of the cacao fruit supply the chocolate and cocoa of commerce. So kindly and eager to please are the people of this valley that it has been called "the land of the gentle Yes."

At Barranquilla, on the coast near the mouth of the river, are to be seen many great river steamboats like those used

on the Mississippi, and on one of these vessels it is possible to sail up the river for six hundred and thirty miles. In seven days the steamer reaches Yeguas, where passengers and freight are transferred to a narrow-gauge railway which runs to Honda. From Honda to Bogotá, the capital, the traveller may proceed in one of two ways. He may take a smaller steamer up the river to Jirardot, whence the railway will convey him the greater part of the way to the capital, or he may ride a horse or a mule the whole distance of sixty-seven miles. Nearly all Colombians ride, and the men usually wear wide-brimmed, steeple-crowned straw hats and blue *pouchos*, or oblong pieces of cloth with a slit in the centre, through which the head is thrust. Wide leather leggings, which buckle round the waist, are also worn, slits being made in them for the passage of the spurs, which sometimes have rowels quite three inches in diameter. The stirrups are of brass, and are shaped like a large slipper.

Bogotá stands on a high but fertile plateau at the foot of the most easterly of the Andean ridges, which rise from fifteen thousand feet to eighteen thousand feet above the level of its grand plaza. The city has a fine cathedral with twin towers, and a massive capitol, on which more than a million dollars have been spent. Most of its houses are built of mud; nearly all of them, owing to the frequent earthquakes, are but one storey high; and few have glass windows. They are painted with the brightest of colours, and have roofs of red tiles. The citizens of Bogotá take life very easily. "We live here," said a native gentleman, "a population of about one hundred thousand, ninety-five thousand of whom do no work, but live upon the others."

The chief port of the country is Cartagena, on the Caribbean Sea. Vessels do not anchor off the city itself, but sail six miles to the westwards, and enter a large bay, one arm of which gives them deep water up to within a mile of the ancient wall of the city. Its chief exports are coffee, cacao, dye-woods, and vegetable ivory or ivory nuts, the seeds of a palm-tree.

The Land of the Equator

ECUADOR is so called because it is crossed by the equator. In Ecuador the Andes consist of two great chains, with a lofty, bleak, and barren table-land between them. Across this table-land run ranges of hills, marking out eight valleys, in each of which a river has its upper course. Three of these rivers break through the eastern Andes, and flow eastwards to the Amazon; while five force their way westwards to the Pacific Ocean, through gorges of great depth and grandeur.

The people of the country are chiefly to be found on the pleasant lower levels of the mountainous west, though wild Indians roam over the densely-wooded slopes watered by the feeders of the Amazon. More than two thirds of the whole population consists of Indians. The animal and vegetable life of the country is rich and varied, while gold, quicksilver, and lead exist in the mountains. There is not, however, much trade; for the roads are very bad, and during the rainy season, which extends from November to May, they are, indeed, impassable, except for pack-animals such as mules and llamas.

The chief seaport of the country is Guayaquil, which may be reached by steamer from Panama in three days. During the voyage we have on the starboard side, eight hundred miles off the coast, the Galapagos Islands, which belong to Ecuador. These islands are volcanic and barren, and for the most part are uninhabited. They are interesting, however, because they contain birds and reptiles unknown in any other part of the world.

Most of the houses, and even the churches, of Guayaquil are built of bamboos bound together with leather thongs, and plastered over with mud of a yellow or white colour. Frail as these structures are, they are exactly suited to the place; for earthquakes are very common, and stone or brick walls would soon topple over. Guayaquil is not only the chief port of the country, but the gate of Quito, the capital.

The journey from Guayaquil to Quito is made by steamer, mule, railway, and stage-coach. Steamer is taken up the Guayas River towards the mountains, the wonderful peak of Chimborazo, covered with the purest white snow, being a great feature in the landscape. One day's river voyage brings us to the terminus of the narrow-gauge railway, which is about seventy miles long. The railway journey then occupies a day, the speed of the train being about ten miles an hour. The road lies through dense tropical forests, where bread-fruit, bananas, india-rubber, cacao, pine-apple, orange, lemon, and palm-trees grow.

Now we leave the railway and mount a mule, for the road lies through virgin forests, up hill and down dale, across frail bamboo bridges spanning roaring torrents, along precipices, through bogs and tangled thickets. The mule is the only animal which can be trusted to walk in these perilous places with safety, and a good mule in Ecuador is more costly than a good horse. On the road coffee and sugar plantations are passed. When the mountains are reached the forests are left behind, and vast fields of coarse grass and stunted shrubs take their place. Here are large flocks of sheep, tended by Indians in goat-skin trousers and *ponchos*. At length, after crossing a number of very dreary plains, we see a broad carriage-road which leads directly to the capital, and Quito, "the city above the clouds," is at last entered, after a journey of seven days from Guayaquil.

Quito stands about two miles above sea-level, on a plateau surrounded by some of the grandest peaks in the world. To the east of the city is the terrible volcano of Sangai; next to it Cotopaxi, with its ever-active crater; then Antisana and the square-topped Cayambe. The latter, which is nearly twenty thousand feet in height, is streaked with snow over its dark rocks, and stands exactly under the equator. To the west, Chimborazo and many other peaks rise in grandeur to the deep blue sky. Though Quito lies nearly under the equator, its altitude gives it the most delightful of climates—spring all the year round.

In shape Quito is a square, with its streets laid out at right angles. The roofs of most of the houses project over the narrow pavements, and thus afford some shelter on rainy days. The streets seem always filled with people, both on foot and on horseback, and their brightly-coloured *ponchos*



SCENE IN THE ANDES.

make the scene quite gay. The most important buildings of the city are the capitol and the cathedral, both fronting the plaza or square, which is laid out with flowers and shrubs. It is said that one fourth of the city is covered with churches and convents. Everywhere in the streets are priests and friars.

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and bells are ringing all day long. In the time of the Incas, Quito was much larger than it now is, and contained a royal palace with a roof plated with gold. The people of Quito are very lazy and slovenly, and the government of Ecuador is nearly always bankrupt.

Peru

PERU, which lies to the south of Ecuador, is naturally divided into three regions, the first being the narrow coastal plain of the Pacific, hemmed in by the vast gray wall of the Andes, and crossed in a few places by streams which look like silver ribbons laid upon strips of green velvet. The utmost advantage is taken of these rivers for irrigation, and near them we find rich plantations of sugar-cane, rice, cotton, and tobacco. In parts of this coastal plain rain has not fallen for centuries. The chief winds blowing over the South American continent come from the east, and are laden with moisture from the warm south Atlantic. As they traverse the continent, they gradually drop this moisture as rain, and by the time they have climbed the eastern slopes of the Andes the last particle of moisture has been wrung from them. They therefore blow over the narrow coast strip of Peru as dry winds. As far as the eye can see, in this part of Peru there is nothing but sand. One may travel over these deserts for miles without seeing a tree, a flower, or a blade of grass.

The second region is the vast mountain district, with long valleys sloping northward from the high table-land of Titicaca. In these fertile, groove-like valleys, the Amazon itself, and many of its great tributaries, have their sources. Amidst the mountains we find many high grassy plains known as *punas*.

The third region consists of the *Montañas*, or eastern slopes of the Andes. Here are vast tropical woods, brilliant with birds and flowers, and rich in cinchona or Peruvian bark, cocoa, india-rubber, and other valuable products. Several of

the great trihutaries of the Amazon water the dense forests of this region.

Callao, the chief port of the country, is three days from Guayaquil by sea. Throughout the whole voyage we see the coast range of the Andes, with broad oceans of fleecy clouds floating below their topmost ridges. The view from the ship is almost always the same—first a sandy plain, then the coast range, then the high plateau, and beyond, the loftier line of the eastern Andes. In some places the mountains rise directly out of the sea, and their bases have been worn into fantastic caves by the all-devouring waves.



LIMA.

Callao harbour is an excellent one, and it usually shows a forest of masts. The town, which stands upon a level plain, is a busy railway centre, and has a number of factories. It is not a beautiful place, and the only scavengers of its narrow streets are flocks of loathsome vultures, which are protected by law.

Seven miles inland from Callao, on a great thirsty plain, stands Lima, the capital of the country. Its little river is dry for most of the year, but is so swollen at times by the melting of the snow on the mountains that its banks have to be walled in with great blocks of stone. The city is laid out in the form of a square, and its narrow streets are paved with cobble-stones. The houses, which are generally built of mud

and bamboo, are two storeys in height, and have flat roofs. If a heavy shower of rain were to fall, half the town would be washed away. No rain, however, falls in this region from year's end to year's end.

The most interesting building in the place is the fine old Spanish cathedral, which stands on a marble terrace in the centre of the town. This cathedral contains the tomb of its founder, Francesco Pizarro, the powerful Spanish general who in 1532 invaded and conquered Peru. At that time the Incas were masters of the country, and their empire had flourished for more than four centuries. Pizarro captured the Inca sovereign by a trick, and after receiving more than fifteen million dollars as his ransom, basely put him to death. A young Inca was then placed upon the throne; but he was a mere puppet in the hands of Pizarro, who ruled the land in the name of Spain. In 1541 Pizarro was murdered, and his body was embalmed and secretly buried in the crypt of the cathedral. The Spaniards in Peru found that they had lighted on a land of gold and silver. Out of one of the temples they took as much gold as forty-two horses could carry. There was so much silver in the country that the Spaniards shod their horses with silver shoes.

Facing one of the little *plazas* of the city is a spirited statue of General Bolivar. This statue tells us something of the later history of the country. For two centuries Peru remained under the Spanish yoke. Under Bolivar, the Venezuelans, in 1824, totally overcame the Spaniards, and Venezuela became a republic. This was the signal for the other Spanish provinces of South America to rise, and Peru called upon Bolivar to lead her troops to victory. After two years of fighting, he was able to expel the Spaniards, and Peru became a free republic. She did not treat her liberator well during his lifetime, but after his death she erected the monument we have just mentioned.

The little port of Mollendo, five hundred miles to the south of Callao, is the terminus of one of the most remarkable railways in the world, which extends to the ancient town of

Cuzco. After running for ten miles or so by the sea, it turns sharply towards the north-east, and soon after begins to climb the mountains by zigzag paths, along narrow ledges of rock, across awful chasms, through tunnelled cliffs, until the clouds are seen far beneath, and the lofty plain of Arequipa comes in sight. During the journey of one hundred and seven miles the train climbs to a height of nearly three miles. Arequipa is the loftiest town in the world; the air is bitterly cold, and it is so rarefied that strangers pant for breath, and are often attacked by mountain sickness.



LAKE TITICACA.

The train runs on again across wide plains covered with fields of corn, and dotted here and there with fruit-gardens and villages, past two of the highest lakes in South America, and pulls up at Puno, on Lake Titicaca, the loftiest lake in the world navigated by steamers. It is a vast expanse of reed-fringed water, girt about with majestic peaks. Steamers built in Glasgow, and transported to Peru in sections, sail from end to end of the lake. There are eight large islands in the lake, and on one of them are the remains of the grand Temple of the Sun, built ages ago by the Incas. They were

such famous builders that the world has nothing to show in the way of stone-cutting and fitting to equal the grand old temples and palaces of Cuzco, the Inca capital. Cuzco lies some two hundred miles north-west of the lake. In its palmy days it was a grand city. The Spaniards tore seven hundred great gold plates from the walls of its Temple of the Sun. As workers in metal, as potters, as engineers, and as farmers, the Incas were far in advance of the Spaniards who overcame them. To the Incas we owe the potato, quinine, coca, and the silky fleeces of the alpaca and vicuña.

Although Peru is peopled not only by Indians, but by white and mixed races, yet much of the trade is directed by foreigners. A visitor sees signs of bad government everywhere. Lazy, insolent negroes infest the towns, and sometimes make them unsafe even in broad daylight. No form of worship but the Roman Catholic is permitted.

El Dorado

THE eastern shore of Lake Titicaca is in the country of Bolivia, which we must next visit. Bolivia (so named after Bolivar) is now wholly an inland state. In 1884 it joined Peru in a war against Chile, and as a result lost all its seaboard. From the bare salt marshes of the Titicaca plain it extends in the north to the selvas of the Amazon basin, and in the south it includes a portion of El Gran Chaco.

In order to reach La Paz, the largest city of Bolivia and sometimes used as the capital, we must cross Lake Titicaca from Puno, and take the coach which waits for the steamer at the southern end. After crossing a level, treeless plain, on which sheep and cattle are pastured, we suddenly descend to a green valley, in one corner of which the quaint little city of La Paz is built. Around it are mountains and hills, and away to the east the snowy summit of Mount Illimani towers up to the sky. The town is built mostly of mud and tiles,

and there is not a chimney in the place. It has a park, or *alameda*, and the chief buildings are the Hall of Deputies, and an unfinished cathedral. La Paz means "peace;" but the name is hardly suitable, for revolutions are very frequent.

Bolivia, like Peru, is very rich in silver, copper, gold, and coal. So rich did the Spaniards find the country that they called it El Dorado, "the land of gold." The famous Potosi mines were discovered some three hundred years ago. They are not yet exhausted, but their full glory has gone, and Potosi, which once numbered a hundred thousand people, has now but a tenth of that number. The capital of Bolivia is Sucre, a small town on the ridge between the basins of the Paraguay and the Madeira.

The Indians of Bolivia, known as Aymara, are a short, broad-shouldered people, very strong and active. It is no uncommon thing for an Aymara Indian to walk seventy miles in a day. The mixed races, however, are idle and ignorant, and spend most of their time in gambling and drinking. They possess a very rich country, but they are too busy quarrelling with their neighbours and amongst themselves to make roads and railways, and to utilize the vast resources of their land.

Chile

IN some respects Chile is the Great Britain of South America. She has a vast coast-line, and her chief strength lies in her navy. Her mines provide her with great wealth, and her railways enable her to transport her products speedily and cheaply to the coast. Her government is steady, her army is well trained, education is cared for, and all religions are respected and protected.

Chile consists of a very long strip of country, nearly two thousand miles from north to south, occupying the whole of the Pacific coast strip from Peru southwards. In the north, however, her territory now extends beyond the eastern Andes.

The average width is only about a hundred miles, and the country slopes sharply from the Andes to the sea. The southern coast valleys have been "drowned," and thus numerous fiords and a swarm of islands have been formed. The northern part of the coast has no deep bays and no natural harbours. Aconcagua, the highest peak of the Andes, stands near the middle of Chile. In this portion of the country there is a lower range of mountains, parallel to the Andes, and lying between them and the coast. Between these two ranges is the central valley of Chile, a very rich and fertile plain, crossed by many short, swift rivers which flow from the Andes to the coast hills, and then run parallel to their eastern slopes until they find gaps through which they hurry to the sea. This central valley enjoys a delightful climate, and is one of the healthiest regions of the world.

The leading port on the Pacific coast of America, next to San Francisco, is Valparaiso, which is seven days by steamer from Mollendo. Some of the towns at which we call seem most uninteresting, and we wonder why they have been built on so dry and barren a coast, but we learn that they are merely the sea-ports of towns which stand in the fertile valleys inland. The town of Iquique we find to be a business-like place, although built of mud and bamboo, with broad streets and many shops, some of which display English signboards.

We have now arrived off the rainless region of Chile. It is a hopeless desert; yet beneath its arid soil are some of the richest mineral deposits to be found in the world. At the coast towns we see large smelting-works in which the produce of the copper mines in the interior is prepared for export.

After crossing the Tropic of Capricorn we call at Antofagasta, the great nitrate port. The western borders of the desert have rich deposits of nitrate of soda, or Chile saltpetre. No mining is needed; the deposit is on the surface. A hole about two feet wide is bored in the ground, and a small boy is let down into it. He scoops out a pocket in the nitrate bed, fills it with powder, fixes a fuse, and is drawn to the surface. The fuse is lighted, and there is a

loud explosion. The earth is cracked and broken for some distance round about, and then the nitrate rock is easily dug out. It is sent to Antofagasta for manufacture, and exported to Europe to fertilize the fields of the Old World. Antofagasta is also busy in smelting silver and copper.

An important industry of Chilo is the collection of guano, which is chiefly composed of the droppings of sea-birds. Millions of gulls and other sea-birds have for centuries made their homes on the islands off this coast, and the rocks are covered with a thick deposit of guano, which looks like sand.



THE HARBOUR, VALPARAISO.

This is dug up and exported to Europe, where it is highly esteemed as a manure.

Not until we reach the silver-port of Caldera do we see any signs of vegetation, and green hills begin to catch our eye. Two days later, when we land at Valparaíso, we are ready to admit that it has been well named the "Vale of Paradise." Rome was built on seven hills, but Valparaíso is built upon twenty, and so steep are most of them that flights of steps, and even elevators, are necessary to get from one part of the town to another. The harbour of Valparaíso is surrounded by an amphitheatre of hills. It is deep and well protected, except on the north side. The city itself is a busy, well-cared-for place. On the main street, which curves round

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the shore, are many fine buildings, and there are several noble churches. There are street cars with women as conductors; boys cry newspapers in the streets; and at night the electric light shines everywhere. The trade of Valparaiso is no longer barred by the Andes, for in 1910 a railway was opened for traffic across the continent to Buenos Aires. This railway crosses the mountain at an elevation of nearly 10,000 feet by means of a tunnel more than six miles long.

In five hours one of the oldest railways in South America



THE PLAZA, VALPARAISO.

takes us to Santiago, the capital. After running some distance in a north-easterly direction, the railway suddenly turns south, and enters the central valley of Chile, which we have already mentioned. Sugar plantations, orchards, and vineyards are passed, and we see a Chilean farmer ploughing his wheat-field with a sharp-pointed piece of wood shod with iron. Despite this rude method of cultivation, the land produces large crops of barley and wheat. Santiago stands on a very

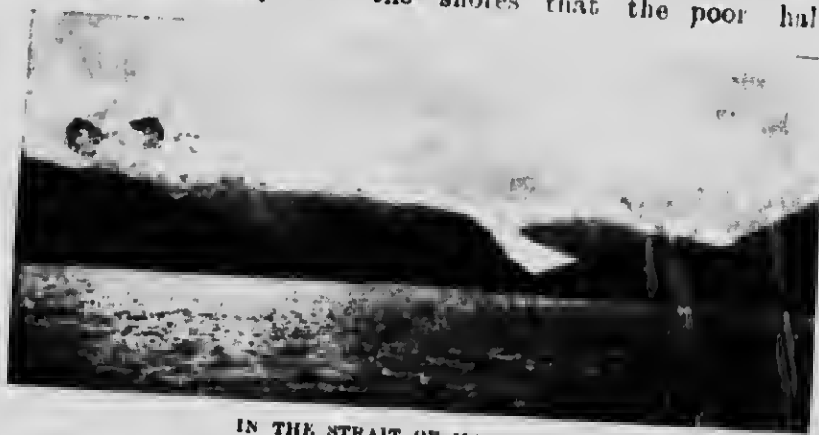
level plain, and consists chiefly of one-storey or two-storey houses, painted pink, white, green, and yellow. A little stream, with covered bridges, flows through the town, which is clean and well laid out. The great *plaza*, with its old fountain and neat gravel walks, is in the centre of the city, and one side of it is occupied by the cathedral, which is plain outside but very gorgeous within. From the plaza we enjoy a splendid view of the great snow-capped mountains which flank Santiago on the north-east.

In the midst of the city is a picturesque hill which rises abruptly from the plain. It is composed of enormous volcanic rocks, which seem to have been thrown together in strange confusion. In the crevices trees, ferns, and flowers have been planted, and the whole hill has been turned into a beautiful park, with gardens, grottoes, statues, and waterfalls. Superb views of the Andes and of the city, with its red-tiled roofs, its leafy avenues, and its busy streets, are obtained from this coign of vantage. Like most Chilean cities, Santiago has electric light and cars, telephones, telegraphs, and newspapers.

Four hundred miles due west of Valparaiso lies the lonely little island of Juan Fernandez, or Robinson Crusoe's Island, to which excursion steamers sail from Valparaiso two or three times a year. Here it was that Alexander Selkirk, put ashore by the captain of his ship, lived alone from 1704 to 1709, "monarch of all he surveyed." His adventures led Defoe to write the story of *Robinson Crusoe*, which every boy and every girl has read, or ought to read, with delight. Defoe, however, placed the island at the mouth of the Orinoco.

Sailing southwards from Valparaiso along the shores of Southern Chile, in due course we arrive at Concepcion, which has two excellent harbours, and is destined to be one of the chief sea-ports of the Southern Pacific. Along the shore for nearly one hundred miles are rich coal-fields, which are now being worked. The people of this district are Araucanian Indians, who were never conquered by the Spaniards, and until recent times were governed by their own chiefs.

As we proceed southwards, the prospect appears more barren and the scenery more picturesque, while the weather becomes bitterly cold and stormy. The fiords, snow-clad mountains, and glaciers remind us of our own Pacific coast in British Columbia. We now draw near to the Strait of Magellan, which separates the South American mainland from the island group of Tierra del Fuego, or "the land of fire." This strait is one of the commercial highways of the world. The country on both sides is very mountainous, the peaks are snow-clad, and thick forests clothe the lower slopes. So steep are the shores that the poor half-



IN THE STRAIT OF MAGELLAN.

naked savages who inhabit the country live mostly in their unwieldy canoes, which are sometimes twenty-five feet long and four feet wide. At the bottom of each canoe, on a heap of sand or earth, a small fire is always kept burning, not for cooking purposes, but for warmth by day and for light by night. From these fires Tierra del Fuego gets its name.

The Strait of Magellan is four hundred miles long; the passage is scarcely ever attempted by sailing-vessels, for the winds are baffling, fogs are frequent, and the currents are strong. Though sailing-ships prefer to round "the Horn," the strait is the usual passage for steamers, and will continue to be so until the Panama Canal is opened.

The Chileans have a supply station, formerly a convict

settlement, on the northern shore of the strait, and in the neighbourhood gold, silver, and coal mines are worked. In the strait there is an ocean post-office. Ships passing by on long voyages leave letters in a box hung on a cliff, and take away any that they find addressed to the ports which they intend to visit.

The Silver State

THE Argentine Republic, or "Silver State," takes its name from the wide estuary of the Rio de la Plata, the Silver or "Plate" River—a name which it received from Sebastian Cabot, who visited it about 1520. The surface of Argentina consists chiefly of steppes and woodlands. In the south are the dreary gravel deserts of Patagonia, and north of them lies the wide-spreading pampas region, which has already been described. These pampas extend from Buenos Aires, the capital, northwards to El Gran Chaco, and westwards as far as Mendoza, the nearest town to Aconcagua, and a station on the Transandine Railway, which climbs the huge mountain barrier.

The great river of Argentina is the Parana, or "Mother of the Sea," which rises in the coast ranges of Brazil, and leaps along with many a rapid and cataract for nearly sixteen hundred miles before it enters Argentina, and is joined by its great feeder, the placid Paraguay. From its confluence to the sea the Parana flows southwards in a navigable stream, varying from one to three miles in width, but in time of flood sometimes broadening out to thirty miles. It finally enters the great estuary of La Plata, which also receives the Uruguay from the coast ranges of Brazil. From this estuary more water is discharged than from any other river in the world, except the Amazon and the Congo. The estuary, which is very shallow and much impeded by rocks and shoals, is a hundred and twenty miles across.

Argentina is not only a great cattle, horse, and sheep rearing country, but a mining country as well. On the slopes of the

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Andes, copper, silver, antimony, lead, and other useful minerals are found; and from the sands of several Patagonian rivers gold is washed. The great wealth of the country, however, is in its vast flocks and herds, which are chiefly owned by wealthy people of Spanish descent. They dwell in the large towns, enjoying all the luxuries of life; while the *gauchos*, or cow-hoys, lead a roving life on the plains, always on horseback, and scorning to enter a town unless there is the prospect of a fight or a revolution.



THE CATHEDRAL, BUENOS AIRES.

Every year more and more grass-land is ploughed up, and miles of thistles are hurnt off, to make way for Indian corn, wheat, flax, and fruits. The chief wheat-lands lie in the Parana basin. Were it not for frequent droughts and for plagues of locusts, Argentina could feed the Old World. Cordoba, an old Spanish town, is the centre of the wheat-growing district. In the harvest-time long strings of ox-carts, with wheels eight feet high and a roof of reeds, come creaking into Cordoba, laden with great sacks of wheat, which are sent by railway to the ports.

The capital of the Argentine Republic is Buenos Aires, the largest and most important city in the southern hemisphere. It stands on the right bank of the La Plata, near the head of the estuary, which is here very shallow. To make a harbour on this shallow shore sufficient for the needs of the city's trade was a difficult matter. The lack of a good harbour at the capital has caused La Plata, nearer the mouth of the estuary, to become a great sea-port.

Buenos Aires, or "good air," needs wider streets and higher houses to become a handsome city. The houses are built of brick. There are few fine public buildings, but there are a number of handsome open squares, adorned with statues of Argentine heroes. In the streets one may hear French, German, Italian, Spanish, and English spoken, and the "Stranger's Guide" is published in four languages. More than half the people of Buenos Aires are European by birth.

On the Parana is Rosario, a town built of one-storey houses on the steep river bank, with a number of short piers, crowded with yacht-like river vessels. It is a busy place, and competes with the capital as a place of export for the products of the interior. Another important trading centre is Bahia Blanca, or "white bay," on the coast, four hundred miles to the south of La Plata. This town is well situated, and is likely to be in future one of the most important of Argentine ports.

Patagonia, the southern part of Argentina, is not so dreary and barren as it was once supposed to be. There are valleys covered with rich vegetation, and many clear streams and lakes, though the country as a whole is rather desolate. The native Patagonians are tall and straight, with a reddish-brown complexion. They wander over the country hunting the guanaco, or South American camel, and the rhea, and they pride themselves on being able to bear cold, hunger, and fatigue without complaint.

Uruguay and Paraguay

THE republic of Uruguay occupies a triangular space between the Rio de la Plata, the Uruguay River, and Brazil. Unlike the often arid pampas of Argentina, it abounds in wood, water, and hills. The climate is moist, mild, and healthy. Cattle and sheep in vast numbers are pastured on the rolling prairies, and are killed by the thousand every day in the long ranges of slaughter-houses which form an important feature



MONTE VIDEO.

of the towns. The flesh is canned for export, and shiploads of hides, fat, horns, and bones are sent to Europe.

Monte Video—that is, the “view mountain”—stands on gently-rising ground on the north side of the La Plata estuary. The *cerro*, or hill, from which it takes its name, is a rock five hundred feet high, crowned with a lighthouse, and standing on the east side of the town. Monte Video is swept by cool sea-breezes, and enjoys a pleasant climate. It is also the best built city of the continent. In Monte Video a quarter of a million cattle are killed every year, and the district is famous for its exports of meat.

Paraguay is an entirely inland republic. It lies between

the Pilcomayo River and the Parana, above its junction with the Paraguay. Most of the country is very fertile, and is often flooded by the great rivers which water it. Paraguay is not a mountainous country, yet it is hilly as compared with the flats of the Argentine Republic. The slopes of the hills are covered with orange groves, and with a kind of holly called yerha maté. The leaves and green shoots of this shrub are dried, ground to a coarse powder, and used as a substitute for tea throughout the South American continent. It is a favourite drink, and is taken at every meal and at every hour of the day. The town of Concepcion is the centre to which the maté tea is brought from the great forests on its way to the coast.

The capital of the state is Asuncion, which stands at the junction of the Pilcomayo and Paraguay Rivers. It is one of the oldest cities of the New World, and is a busy place, with colleges, banks, telegraphs, and newspapers. Vast quantities of oranges are gathered between May and August, and are exported to Buenos Aires and Monte Video. Indeed, Paraguay is, beyond all other South American states, the country of oranges. Orange-trees are found in every thicket, and the mud huts of the farmers stand amidst orange groves. During the season great piles of oranges crowd the wharves of all the river towns, and fill the holds of steamers, and are heaped up within a high wire netting on their decks.

The north-western part of Paraguay lies within the great hunting country, El Gran Chaco. It is inhabited almost entirely by Indians, whose chief weapons are bows and arrows. Nearly all the people of Paraguay have Indian blood in their veins.

Brazil

WE now come to the vast tropical country of Brazil. It is nearly as large as Canada. The word "Brazil" comes from *brasil*, the name of a dye-wood which was used in

Europe during the Middle Ages, and was abundant in the country of which we are speaking as far back as 1503. Brazil is a country of highlands and low wooded plains. The highlands occupy more than a quarter of the country, and form, as it were, an island, with the Atlantic on the north-east and east, and the low river basins on the west. This island of table-lands is ridged with mountain chains and cleft by deep valleys, the chief range being that which fronts the Atlantic from the mouth of the San Francisco River to the southern extremity of Brazil. Its highest peak, which stands sixty miles west of Rio de Janeiro, is little more than half the height of Aconcagua, the monarch of the Andes. The lowland region is found in the broad river basins in the north-west and west. In the valley of the Amazon, which occupies more than half the area of the country, these lowlands consist of the selvas, forest regions of dense vegetation of which we have already spoken.

This vast wilderness, overflowing with a wealth of timber, dye-woods, oils, gums, resins, and tropical fruits, has scarcely a civilized inhabitant. The best india-rubber in the world is obtained in Brazil, from a tall tree somewhat like the ash. The process is not unlike that of making maple-sugar. Cuts are made in the bark of the tree, and from these flows a milky sap which is collected in vessels. Bottle-shaped moulds of clay are then dipped in the juice, and held over a fire until the juice hardens so as not to stick to the fingers. The mould is dipped again and again, until a thick coating of rubber is formed over it. The clay in the inside is then moistened and picked out, and the india-rubber, which is now somewhat like a bottle in shape, is ready for export. The Brazil nut, a fruit well known to boys and girls, grows in these forests on slender trees more than a hundred feet high. The top is bushy, and the fruit which hangs from it is large and round. When opened with an axe, from fifteen to fifty nuts are found inside. Millions of these nuts are exported from Para every year.

The grassy plains of the central highland region afford

pasture for vast herds of wild cattle and horses, while sheep are reared in tens of thousands on the southern slopes bordering on Uruguay. In the east and the south are some of the richest mines in all the world. Gold, diamonds, iron, coal, and many other valuable minerals abound, especially in Minas Geraes, one of the chief provinces in the highland region. Though Brazil has been an important mining country for centuries, she has not yet opened up a tithe of the treasures which lie hidden beneath her soil.

Another important source of wealth is coffee, which is cultivated to such an extent that Brazil produces half the coffee grown in the world. In the central provinces one may travel mile after mile amidst groves of coffee shrubs, overshadowed by palm-trees to keep off the intense heat of the sun. Brazilian coffee is coarser than that generally used in Europe, but it is much relished in the United States and in other countries. Indian corn is a common grain crop, but the food of the better classes is manioc flour, or tapioca, which is made from the roots of a shrub growing from six to eight feet high. The roots are grated, dried on hot metal plates, and roughly powdered. This has to be done with great care, for, strange to say, the milky juice of the plant is a deadly poison. Cotton and sugar are also largely grown, especially on the hot, steaming Atlantic plain.

About the year 1505, Portuguese settlers arrived in what is now Brazil. They found the country occupied by several hundred Indian tribes, differing from each other in language and in habits. About forty years later, Jesuit priests began the work of converting and civilizing the natives. They did their work very well, and gathered many of the wandering tribes into villages. There are still, however, many Indians roaming over the grassy plains and through the thick forests of the interior, just as their forefathers did before the arrival of the white man. They still dress in paint and feathers, and shoot down their prey with poisoned arrows. The greater part of the people, however, are of European descent, and speak a form of Portuguese, though some of the more recent settlers, such

as the Germans, prefer to retain their mother-tongue. Next in number to the Europeans come the negroes, who are descended from African slaves brought by the early Portuguese settlers.

From Monte Video, on the Rio de la Plata, a voyage of about eleven hundred miles brings us to Rio de Janeiro, the capital of Brazil. This city—"the Queen of the South"—lies at the south-west corner of a deep bay, which is surrounded on all sides, except the narrow entrance, by granite hills. The harbour is renowned all the world over for its safety and beauty. At its entrance is the Sugar Loaf, a steep, smooth rock that rises sheer out of the water for thirteen hundred feet. The streets wind along the shore of the bay, and the



RIO DE JANEIRO.

buildings cover the sides of steep hills, behind which is a background of rocky peaks.

In the business part of the town the streets are very narrow—some so narrow that carriages are not allowed to pass through them. The houses, however, are very picturesque. The fronts are often beautifully carved and gaily coloured, while most of them have little balconies and quaint windows. Everywhere on the quays we see coffee, for half the coffee grown in Brazil is exported from "Rio."

Every visitor to the capital climbs the Corcovado or "hunch-back" peak, which is situated some three or four miles south-west of the city. It is a steep granite cone, and the climbing

is done by a mountain railway. The railway winds along valleys, skirts ridges, and passes through a virgin forest of splendid trees, shrubs, creepers, ferns, and orchids. From the top there is a magnificent view of mountains and hills, the huge island-studded bay of Rio, and the great city itself. Across the bay are seen the famous Organ Mountains, which resemble the pipes of a great cathedral organ. Amongst other "sights," Rio has a wonderful botanical garden; its special boast is a splendid avenue of royal palm-trees, each over eighty feet high.



PERNAMBUCO.

One thousand miles to the north of the capital stands Bahia, the second city of Brazil. Bahia is only the shortened form of its full name, which means "the City of the Holy Saviour on the Bay of all Saints." On the morning of the fourth day after leaving Rio, the port of Bahia is sighted. Here again we find ourselves in a rocky bay like that of Rio. The harbour is deep and safe, and for that reason the city of Bahia has become important. All along the shore there is a rocky slope, up which steep streets have been built, for there is not room for a city on the narrow strip of level ground between the cliff

and the water's edge. Bahia is a busy city, and its wharves are piled with sugar, coffee, and tobacco, its chief exports.

Some six hundred miles to the northward of Bahia is another great port, known as Pernambuco, or Recife, "the city of the reef." Five hundred feet from the shore, along the whole front of the city, and for several miles beyond, extends a great ridge of rock which forms a natural breakwater, and provides a safe harbour for all but ships of the deepest draught. From the sea Pernambuco appears at its best. The whitewashed or brightly tinted houses are lofty, and prettily built in the Portuguese style, with channelled tiles and turned-up corners to their roofs. The land on which the town stands is quite flat; but about two miles to the north there is a hill dotted with white houses, which peep out of dark-green foliage. Everywhere in the plain around are palms, bananas, bamboos, and dense groves of mangoes. Pernambuco is the great sugar-exporting town of Brazil.

The Guianas

BETWEEN the north-east boundary of Brazil and the mouth of the Orinoco lie the only three foreign colonies on the mainland of South America. The smallest and most easterly of the three is French Guiana; the next, both in size and in position, is Dutch Guiana; and then comes British Guiana, which has a greater area than the other two put together. These three colonies have a hot and unhealthy coast, which is flooded by tropical rains, and is exceedingly fertile. Behind this coast, to the south, are uplands crossed by muddy rivers, which flow wildly over many cataracts through a tangled virgin forest.

The native Indians of the interior are of the same race as those found by Columbus on the West Indian Islands. These Caribs, as they are called, have given their name to the Caribbean Sea, and have also furnished our language with the word "cannibal;" they are still said to be man-eaters.

British Guiana is well watered, and as most of its rivers enter the sea through deltas, the coast region is scored in all directions by channels. The land is accordingly very low ; in many parts it is below sea-level. The Dutch, who were the first to take possession of the country, built dikes and walls to keep back the sea, and the fertile land so reclaimed is still the only part of Guiana where crops are grown and white men live. The longest river is the Essequibo, which rises almost under the equator, and enters the sea by a broad mouth after a course of some six hundred miles.

Near the western border of British Guiana stands a remark-



GEORGETOWN.

able flat-topped mountain called Roraima. It slopes gradually upwards for more than two thousand feet from the plain, and then suddenly shoots up two thousand feet more as a vast wall of red rock. In appearance it is like a huge fort. The inland regions are not yet thoroughly explored. Beyond the mangrove swamps of the coast the country rises in a series of terraces leading to grassy table-lands called *savannas*. These are bounded by mountain ranges, which, like the savannas, are generally treeless. In the south are dense forests and rich gold-fields, which are, however, difficult to reach.

The capital, Georgetown, is situated on the right bank of the river Demerara where it enters the ocean. A stone

wall a mile in length bars out the sea, and as the land is below the level of the waves, steam-pumps are constantly at work draining it. Palms and other trees are planted about the streets, and from the sea the whole place looks like a large garden.

Dutch Guiana is often known as Surinam, from the name of its central river. At the mouth of this river stands Paramaribo, a town of wooden houses with great green doors, like those in Holland. Canals thread the streets, and the place is well drained. There are many sugar plantations, worked by negroes under Dutch overseers.

French Guiana, also called Cayenne from its capital, is separated from Dutch Guiana by the broad river Maroni. It is a colony which makes but little progress, partly because it is a convict station, and has therefore gained a bad name. The climate is unhealthy, and in France transportation to Cayenne is considered as terrible as sentence of death. There are not many plantations in French Guiana, but gold has been recently discovered, and is now exported.

“ Little Venice ”

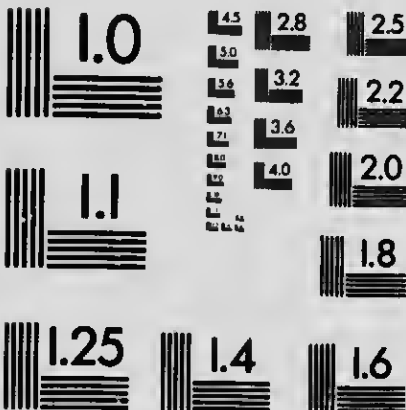
BETWEEN British Guiana on the east and Colombia on the west lies the republic of Venezuela, much of which is almost as unknown now as it was in the days of Good Queen Bess, when Sir Walter Raleigh searched within its boundaries for a fabled city of gold. The country received its name from the early Spanish explorers, who found in the land-locked inlet of Lake Maracaibo a native village built on piles. Half in joke, they called it Venezuela, or “ Little Venice,” and the name in course of time was given to the whole land.

Venezuela is the country of the great river Orinoco, which flows through wide, park-like plains known as llanos. These llanos are bounded on the south by wooded heights, and on the north by ranges of snowy mountains, which fringe the



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coast of the Caribbean Sea, and are really part of the Andes. Almost all the important towns lie on the northern slope of the latter range, in a cool climate. The coast has scarcely any good ports; some of them are in the midst of unhealthy mangrove swamps, and others are open to great seas which roll in furiously and work great mischief.

The Orinoco, the third in size of the great South American rivers, takes its rise in the unexplored highlands of the south, and, circling round, flows across the country to the Atlantic. In its upper course the banks of the river are overgrown with dense woods, in which scarcely a man or an animal is to be seen. The main stream flows northwards for two or three hundred miles, and is joined by several large rivers, one of which, the Cassiquiare, forms a connection with the Amazon system by way of the Rio Negro. At the point where the Orinoco suddenly swings round to the east on its way to the sea it is joined by the Apure, which comes from the Andes, and is said to be navigable for more than five hundred miles upstream. The Orinoco then breaks through the highlands in a splendid cataract, and plunges through a number of gorges until it divides into many channels and forms a large and densely-wooded delta. Like the other great rivers of South America, it floods vast areas of country during the wet season, and forces the Indians who dwell on its banks to take refuge in houses built in the branches of the trees.

The Orinoco may be ascended for seven hundred miles, and at that distance from the sea it is a mile wide. Its total length is about fifteen hundred miles. Two or three times a month river boats sail from Port of Spain in Trinidad to Bolivar, three hundred and sixty miles up the Orinoco. Let us book a passage in one of these steamers. We enter the Macareo mouth of the Orinoco, and make our way up against the current. The tawny stream is half a mile wide, and its shores are thick with water-plants and forests. Hour after hour we sail on, and see scarcely a living soul. At last a small Indian village is passed. Its houses are merely grass roofs, supported by wooden pillars. Near by are fields of

manioc and hananas, roughly tilled by the natives, who are seen lolling in their hammocks slung between the trees.

Now the stream leads us into the main river, and we approach a little town which consists of two streets of broken-down mud huts. The mails are sent ashore, and our engines begin to throb once more. In the distance we see the mountains, ridge behind ridge, and pass a number of very large islands. Towards evening we stop for an hour at a little town near the mouth of the Caroni River, on the banks of which, some hundred miles or so to the south, are the rich gold-reefs of Venezuela. The gold from the mines is shipped at this place.

On the third day after leaving Port of Spain we reach Bolivar, so named in honour of the Liberator, to whose memory a bronze statue has been erected in the town. The place is prettily situated, but the roads are so steep that no carriages can be used, and they are dangerous even for saddle-horses. It is said that when the river overflows its banks alligators swim up the streets, and have been known to snap up children standing at the windows of the houses. From Bolivar valuable drugs and other products of the forest are exported.

Returning to Port of Spain, we may take ship for La Guaira, the chief port of Venezuela. Here British engineers have built a breakwater, inside which vessels are protected from the great ocean swell which rolls unceasingly in upon the coast. Behind the port are lofty hills, reddish-brown in colour, and almost bare of vegetation. The town is perched on the steep slopes, and looks as if a touch would send it headlong into the sea. The chief trade of the place is in cocoa.

Caracas, the capital of the country, lies in a beautiful valley, shut in by lofty mountains. Its streets are narrow, and the houses, built of mud or of brick, with peaked roofs, are, as a rule, only one storey high. Many of the public buildings, such as the University and the Hall of Congress, are very fine; and there are a number of squares adorned with statues, flowers, and trees. The town is well supplied with street cars, cabs, gas, water, telephones, and newspapers. Around it are rich fields planted with sugar-cane, vegetables, coffee, and fruits.

The distance from La Guaira to Carácas is only six miles in a straight line ; we can hardly say "as the crow flies," for in order to get from the port to the capital in a straight line, one must fly not like the crow but like the condor, seeing that some of the loftiest and most rugged mountains in South America block the way. A railway between the two places was made by an English company at very great expense, owing to the number of cuttings and tunnels that were necessary. There is scarcely a straight stretch of five hundred feet in the whole line, which for twenty-three miles winds in and out of valleys, crawls along narrow ledges, pierces vast rocks, and ascends three thousand feet in the course of the journey.

THE OLD WORLD

The Discoverers of the Old World

ONE of the first geographical facts that we learn at school is that Christopher Columbus discovered America, or the New World. Have you ever thought of asking who discovered the Old World? It will not do to answer that the people who lived first in each country must have discovered it; this answer would rob Columbus of his glory. He was not the first man in America, for there were many natives living here when he came. But Columbus was the first man to bring the knowledge of the New World to the European races from whom we are descended, and whose knowledge has become ours. When we speak of Columbus as the discoverer of America, therefore, we only mean that he was the first to make it known to us, or rather to our ancestors. So when we ask who it was that discovered the Old World, we mean, Who were the first Old World travellers whose books have come down to us? Who began the study of the Old World and its peoples?

Even that question is not easy to answer. It seems, however, that the land of Phœnicia, on the shores of the Mediterranean Sea to the north of Palestine, was the home of the first explorers, and that the little sea-girt land of Greece was the cradle of geography so far as it is to be found in books. We must go very far back to find the beginnings of this science—many centuries before the birth of Christ.

The ancient Phœnicians were a wonderful people. They

266 The Discoverers of the Old World

were the great manufacturers and traders of ancient times, and it is to them that we owe our alphabet, which came to us through the Greeks and the Romans. They manufactured glass-ware of great beauty; they were weavers of fine linen cloth, and they had great skill in dyes, especially in making a wonderful purple dye. Like our own race in the modern world, the Phœnicians sought markets in all lands for their manufactures. Their ships navigated the Mediterranean Sea, making voyages which in those days were longer and more perilous than any that are undertaken by our sailors. They planted colonies and trading-posts on the shores of every land they knew. Their ships even ventured outside the "Pillars of Hercules," the rocks guarding the Strait of Gibraltar, and dared the storms of the Bay of Biscay, finding a rich reward in the stores of tin which were to be purchased in the far-off island of Britain.

Traders are not always great explorers. Even in our own land we have heard of fur-traders being blamed for hindering discovery lest the opening up of their lands to others should spoil their trade. These old Phœnicians were blamed in exactly the same way. It is said that they spread terrible tales of dragons and other fierce creatures which guarded the treasures of far-off lands, and in this way they scared off others from sharing in their profitable trade. Whether this was so or not, we know that for centuries they were the only real traders and travellers of the ancient world.

It is curious now to read the books of the first writers on geography, with their quaint mixture of fact and fable; and the oddest thing of all is that the fables were believed, while many of the facts were thought to be impossible stories—mere travellers' tales. Thus one old Greek author tells of a voyage which was made round Africa long ago, not for trade but for discovery. The travellers sailed through the Red Sea and the Indian Ocean, and they said that when they turned westward they had the sun on their right hand—that is, in the north—at midday. This was thought to be impossible, and the author therefore declares that these travellers were

simply inventing wonders to deceive those at home. We now know, of course, that if they sailed round the south of Africa they must have seen the sun in the north, and this strange story of theirs is the strongest proof they could have given us that the voyage was really made.

Other reports about Africa were readily believed—tales of griffins guarding stores of gold, of dog-headed men, of pigmies or dwarfs, of elephants trained for war, and of enormous and savage "worms" or serpents. There came a time, however, when all these stories were regarded as mere fables, though some of them have again been proved true by modern travellers.

Some of the great Greek writers set about a more scientific study of the earth, and we shall see that they had a wonderfully good knowledge of it, considering the times in which they lived. We are apt to think that it is only since the days of Columbus that men have believed the earth to be round. But we find that this fact was known to the Greeks some four centuries before Christ, and that the very same proofs of it were used that we learn in our schools to-day.

It was then thought that the tropical regions were too hot to be habitable by men, and the northern parts of Europe too cold. Hence the old writers speak of the "habitable world," by which they mean only the north temperate zone; but they said there must be another "habitable world" in the southern hemisphere. It was only the habitable world that they gave much heed to, and so their maps are apt to give us a wrong idea of what they thought about the world as a whole.

A writer who lived two centuries before Christ, and seventeen centuries before Columbus, made this remarkable statement: "If it were not that the vast extent of the Atlantic Sea rendered it impossible, one might even sail from the coast of Spain to that of India." Another writer about a century later also declares that this might be done. These old geographers supposed the earth to be a good deal smaller than it really is. This was due to the want of accurate instruments

with which to measure it. Like the modern scientists who invented the metric system, they tried to measure the exact distance between two places on the same meridian, in order to determine the whole circumference of the earth. Like those modern scientists, however, they measured it wrong.

The science of geography arose, as we have seen, from the trade and commerce of the early world. It was furthered greatly by the Empire-builders of old. The conquests of Alexander the Great opened up the East as far as the valley of the Indus. The power of Rome did even more for the West, for the Roman legions bore their eagles over nearly every country of the then known world, along military roads which may be traced even at the present day. Thus the Old World was gradually discovered. The temperate parts of Europe, Asia, and Africa were explored, and books were written about them. In the palmy days of Rome, when Augustus was emperor, geography was taught in the schools and maps were studied on the walls. This was nearly two thousand years ago !

The more we get to know about them, the more surprised we are to find that the people of those distant times were very like ourselves, in spite of all the differences between us. And we shall find the same to be true regarding the people of distant places. Men are very much alike all over the world and all through the ages. Their differences are mostly on the surface.

Eastward Ho !

IT is usual to speak of the Old World as consisting of three continents—Europe, Asia, and Africa. When we look at the globe or at a map of the world, we see that this great land area divides more naturally into two parts. In the south is the compact mass of Africa, almost cut off from the rest by two long narrow seas, the Mediterranean Sea, a branch of the Atlantic, and the Red Sea, a branch of the

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Indian Ocean. To the north and east lies a much larger mass, forming really a single huge continent.

This vast stretch of land is usually spoken of as forming two continents, the western portion being called Europe and the eastern and larger portion Asia. There is, however, no natural boundary between the two; the plains and mountains of the one are continued in the other. Geographers find it useful to have one name for this double continent, and they have agreed to call it Eurasia.

Though Europe and Asia are thus joined physically, there is a real distinction between them as regards their inhabitants.



THE NEW WORLD AND THE OLD.

When we read their history, we find that the peoples of the two continents have always been more or less divided by a very real boundary. In the south this boundary was the sea. Even the narrow seas, such as the *Ægean*, the Sea of Marmora, and the Black Sea, were a barrier against travel in the olden times more effective than the Atlantic Ocean is to-day. Farther east was the mountain wall of the Caucasus. Northwards lay another form of natural barrier which the map makes little of. This is a region of plains, partly desert, and nowhere capable of supporting a large population. Such a region forms a great obstacle in the way of pastoral or agricultural races. In our days the construction of railways enables us to overleap barriers of this kind. In past times

and among primitive peoples it was only some great national movement or the organized march of an army that could overcome such obstacles.

Hence it is that Europe and Asia are really as distinct in most aspects as if long leagues of ocean lay between them. On the fringe of each there are traces of influence from the other. In the main, however, they are the homes of different races, whose whole history and civilization, language, religion, and manner of life are distinct from each other. The civilization of Europe was carried over to the two Americas, and has impressed itself deeply on great parts of Africa; in Asia, however, and even in the parts of it which are subject to European rule, European civilization has produced but little effect.

"For East is East, and West is West,
And never the twain shall meet."

It will be most natural for us, therefore, to regard Europe and Asia as two distinct continents, and to finish our round of visits in the one before we pass on to the other. And as blood is said to be thicker than water, we shall begin our visits in Europe, the ancient home of our people.

We have no difficulty in finding our way thither. From the St. Lawrence every week there sail eastward some of the finest steamers on the Atlantic—the finest in the world. Let us make our way on board one of these as she lies moored at the quay beneath the historic cliffs of Quebec. All seems bustle and disorder, the noise and confusion of getting on board the last bales of goods, the heavy baggage of passengers, and the scores of mail-bags, carrying news of friends and kindred from the New World to the Old.

But there is order in all this confusion. Every man knows what he has to do, and he does it. As the hour for sailing draws near, the wharf is cleared of its hamper of bales and boxes. The steam cranes become silent. The last laggards hurry back from their walk round the city and reach the gangway just in time. The captain and the pilot are on their lofty outlook station on the bridge, and officers are on duty

fore and aft. We feel the faint throb of the engines as the screws begin to revolve; warps are cast off from the wharf and hauled on board; the ship swings out into the river and we are off, eastward bound.

As the twilight deepens the lights gleam out from Quebec and from Levis, tier above tier, from wharf to citadel, merging into the firmament of stars now sparkling overhead, while the active ferry-boats look like great fireflies flitting from shore to shore. It is a fairy landscape we are leaving; in front lies the dark and silent river with only its sentinel lighthouses to guide us. Next morning we seem to be in the open sea, but it is only the gulf as yet. All day we have glimpses of far-off blue mountains, still streaked with snow.

It is too early in the season for the Belle Isle route, so we keep to the south of Anticosti, which we see low on the left-hand, or port side, as the sailors call it. Night falls again before we sight Newfoundland, and next morning we are fairly out in the open. Then for four days our whole landscape is a circle of sea, we ourselves being in the centre. Sometimes it is a smooth and sunny sea we look at, sometimes a dark and ruffled one, but always there is the long round swell of the ocean under us. The sea-gulls are with us all the way if the weather be fair. Do they cross with us from the New World to the Old, or do they come half-way and turn back. While others from the farther side meet us?

Six days have run their course, and so pleasantly has the time sped that we can hardly believe them so many. Then there is a general waking up among the passengers. Land is in sight. We catch glimpses of jagged blue peaks on the horizon. By-and-by we are coasting along the rocky shores of the south of Ireland. We enter a narrow bay, guarded by steep cliffs and rocks, and at its farther end we see the roofs and spires of a considerable town. It is Queenstown, but we do not land there: a small steamer comes fussing alongside; mail-bags are taken on board, and a few of our passengers leave us; then we resume our way towards Liverpool. All day the shores of the "Green Isle" charm our eyes.

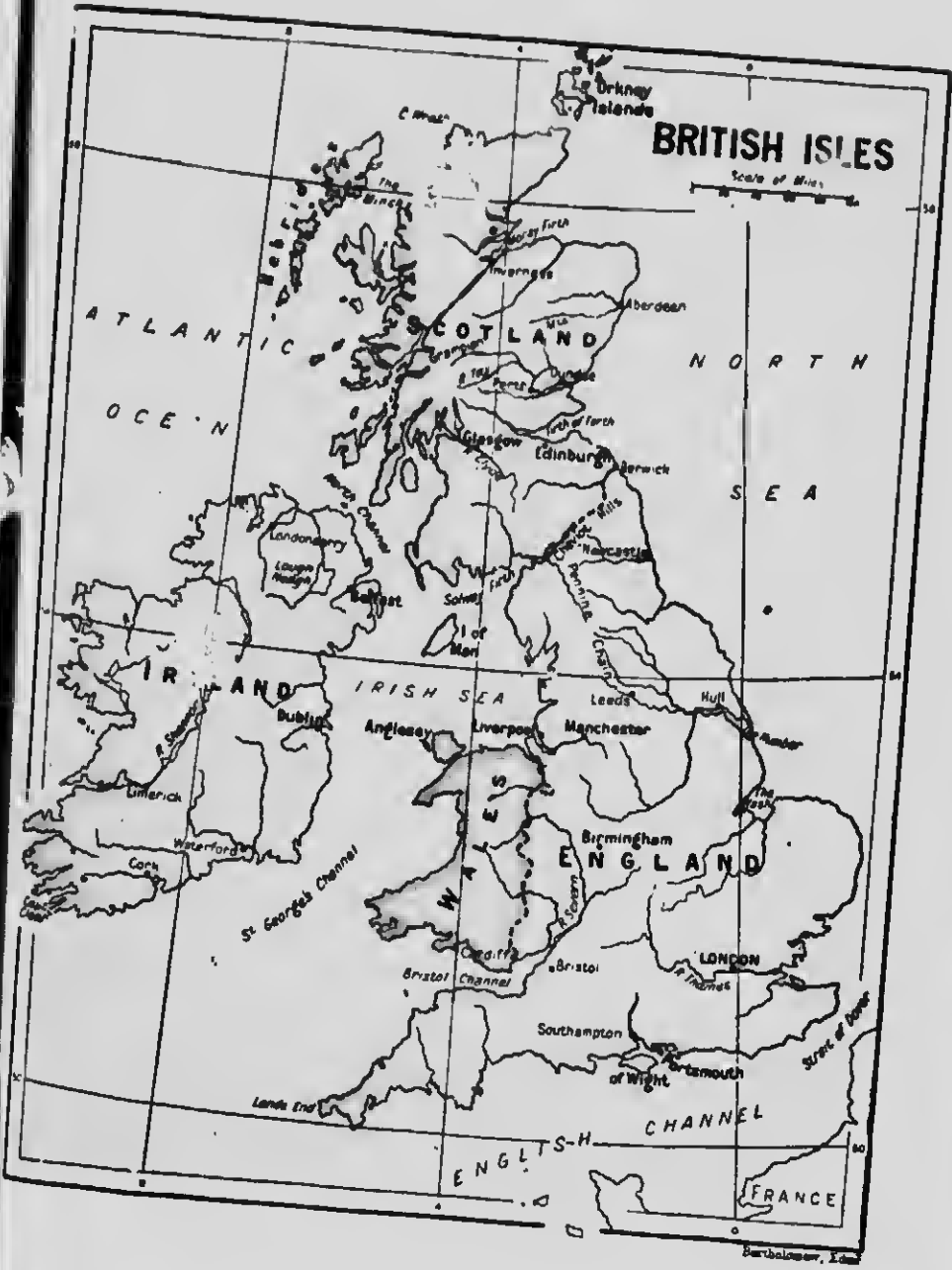


RELIEF MAP OF BRITISH ISLES.

Trim farms and green meadows ; dark cliffs and sandy beaches, with here and there a village or a larger town where fishing-boats and coasting craft are passing out and in,—these and much else hold our attention. By-and-by on the right or

BRITISH ISLES

Scale of Miles



Bartholomew, Ed.

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starboard side land also shows ; it is the mountains of Wales. Afternoon brings us abreast of the bold cliffs of Holyhead, and evening sees us treading our way up the buoyed channel which leads between sandy shallows to the great port of Liverpool.

Night falls ere our huge steamer is moored at the landing-stage, but our train is waiting just across the way. We say good-bye to the ship whose officers and crew have given us so safe and pleasant a passage. Then we find our baggage in a huge and gloomy hall, where Customs officers are waiting to see whether we have any smuggled goods with us. We assure them that we have none, and they let us pass on to take our places in the "boat train" for London. The carriages seem very small, and are all divided into little boxes, holding six or eight persons. But it is late, and we are tired ; we must leave till a new day the new sights around us. A quick run of four hours brings us to London, and we are glad to reach our hotel and get to bed.

In London

HERE we are in London, the largest and wealthiest city in the world. It spreads over a space of nearly 700 square miles, and within this area live over seven millions of people—a population almost equal to that of the Dominion of Canada. The city stretches for miles along both banks of the river Thames, which, though a small river as compared with many of ours, is one of the most famous water-ways in the world. No port in ancient or modern times has ever equalled London in the number of ships which enter it. It is the chief market for many of the products of other lands—tea, coffee, cocoa, spices, furs, and many others. Only three countries in the world—the United States, Germany, and France—have a greater trade than this one city. London is the great money-market of the world. In the

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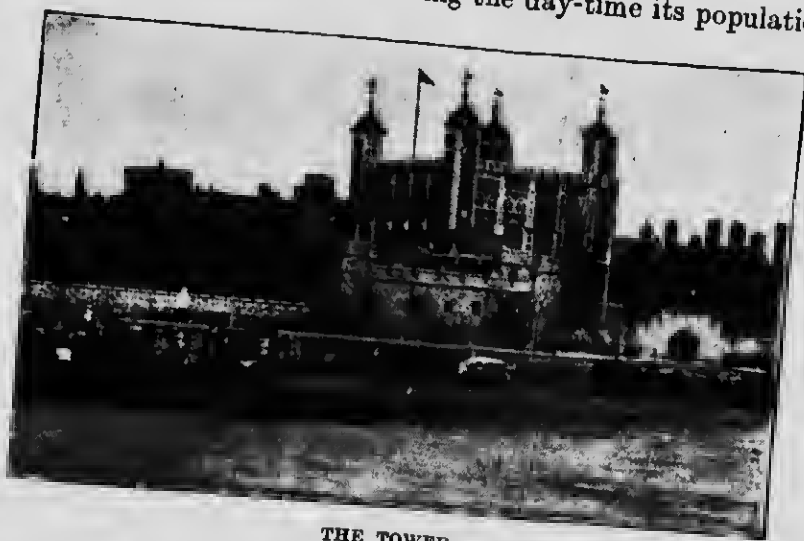
ST. PAUL'S CATHEDRAL, LONDON.

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busiest part of the city we see the Bank of England, or rather the massive grimy walls and heavy iron gates which protect the real bank within. In the streets near at hand are the offices of dozens of other banks, smaller, and yet carrying on a large and far-reaching business. The money transactions carried on here day by day affect the whole world from China to Peru.

The central part of London is called "the City." This portion, scarcely more than a square mile in extent, has only some 30,000 residents, but during the day-time its population



THE TOWER.

is ten times that number. Every morning the streets swarm with thousands of hurrying men and women, brought near the scene of their work by suburban trains, underground "tube" railways, street cars and motor buses, and every evening this human flood ebbs again through the same channels. It is a "City" of business offices, not of homes.

In this part of London are many of the famous buildings which every stranger visits. On a height overlooking the river is the Tower, the oldest building in London, founded by Julius Cæsar before the birth of Christ, and rebuilt by William the Conqueror and his sons a thousand years after. Once the

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scene of many a cruel imprisonment and execution, it is now an interesting museum of armour and weapons, a barracks and a military storehouse. The crown of England and other state jewels are kept in the Tower for all to see.

Some two miles westwards, and beyond the limits of the "City," stands the world-renowned Westminster Abbey, gray with its thousand birthdays. Here have been crowned the

kings of England since before the Norman conquest; and here George the Fifth was crowned king of these islands and of the "British Dominions beyond the Seas." Fourteen kings lie buried within its walls, and many who were greater than kings. In the Poets' Corner we see the tombs of those whose names are familiar wherever our tongue is spoken—Chaucer, Spenser, Macaulay, Dickens, Tennyson.



WESTMINSTER ABBEY.

Just over the way stands the noble pile of buildings where the "Mother of Parliaments" holds its sessions. Close at hand are the many Government Offices where the army, navy, and other departments are managed, and where not only British affairs, but those of the Empire, are carried on. We may call, if we wish, at the office of our own High Commissioner, and a glance at the visitors' book will probably show us that we are not the only Canadians who are sojourning in the centre of the Empire.

In the centre of the "City" rises a huge building, whose



HOUSES OF PARLIAMENT, LONDON.

domo we have noticed rising high into the haze. This is St. Paul's Cathedral, which has well been called the monarch of English churches. In its crypt are the tombs of Nelson, Wellington, and others whose names are written in our history. The tall column we may have noticed nearer the Abbey, rising in the noble space of Trafalgar Square, is a monument to Nelson. Facing it is the long pillared front of a building well worthy of more visits than one — the National Art Gallery of England.



TRAFALGAR SQUARE AND BRITISH MUSEUM.

A little to the north is a huge square building, which we must not pass by. It is the British Museum. Here is the largest library in the world. A copy of every book printed in the United Kingdom must be placed upon its shelves, and many others of value are also added year by year. They are carefully guarded, but may be freely used by any who wish to consult them.

Old books are here as well as new. There are beautiful volumes written by hand on parchment before printing was invented, and many curious ancient documents from Egypt

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and other Eastern lands. There are rooms which contain priceless examples of art and industry from Egypt and Assyria and from Greece and Rome, and among these we could spend many days. But we must see as much of London itself as we can, and so we leave them.



BUCKINGHAM PALACE, LONDON.

The streets of London seem strange to us at first. They wind about and cross one another in all directions. There are some thirty thousand of them, and no Londoner has ever seen them all. Some are wide and noble, some narrow and mean, but in the central area they all seem too narrow for the tide of traffic which surges through them. At the crossings there are policemen on duty to regulate the various streams that meet there. By merely raising a hand they stop every driver going, say, north or south, leaving clear the road from east to west. By-and-by another movement stops this current and sets free the former. The London police are famed all over the world for their skill in such work. Even the busiest crossings are thus kept safe for foot-passengers, who have only to wait till the pause is made which allows



ST. JAMES'S PALACE, LONDON.

them to cross. In some places, however, there are underground passages by which one can cross the busiest street without delay or danger.

There are no street cars in the central part of London; they would be too much in the way. Motor omnibuses are there instead, and noisy and evil-smelling though they are, they can wind in and out among the other vehicles as openings are made, and allow their passengers to enter or alight at the edge of the footway. Heavy drays and light vans are busy carrying to and fro all sorts of goods, and everywhere we see the London hansom, either the old horse-drawn form or the newer taxi-cab.

Yet with all this rush of wheel-traffic, London streets are



KENSINGTON PALACE, LONDON.

not noisy. The asphalt surface is beautifully smooth; there is no rattle of wheels, and the prevailing sound is the "clip-clip-clip" of quick-

stepping hoofs—which seems peculiarly a London sound. We are at first surprised to see all the drivers on the wrong side of the road, but we remember that in Britain all carriages must keep to the *left*, while foot-passengers keep to the right, as with us. The same habit of driving to the left is the rule in Nova Scotia and in British Columbia.

But London is not all streets. It is well supplied with parks and open spaces, and in many of these we can sit under the trees by the side of beautiful little lakes or ponds and forget that we are in the heart of a great city. A few miles up the Thames brings us to Kew Gardens, Richmond Park, and Hampton Court, where there is some of the most beautiful woodland scenery in the world.

In London itself there are three royal palaces to see, and we may also enjoy a visit to Windsor Castle, farther up the

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Across England

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Thames. It stands on a hill on the north bank, and from the top of the Round Tower we have a charming view of English scenery. The oldest parts of the castle were built by William the Conqueror, but it has been much altered and enlarged, and is now a vast and stately pile. In St. George's Chapel, a beautiful building of the time of Edward the Fourth, standing within the castle grounds, seven English kings lie buried.



THE DOWNS.

Across England

LONDON is not England, however. We wish to see something of the country as well as of the capital. We must first study the map, in order to form some idea of the country as a whole, and to understand the relations of the various portions that we shall see. The south and east, we observe, is a plain; there are hills in it that may seem pretty high to us, but no real mountains. In the west and north the country may be called mountainous. The hills in the south-east, the Downs, as they are called, are formed of chalk. The quarries there look like splashes

of whitewash on the green hillsides, and the sea-cliffs shino white in the sun. The level districts are all well cultivated. The fields of grain or pasture look very small and very trim with their hawthorn hedges, and the smooth white roads running between them are as carefully kept as our park avenues or our race-tracks. The towns are not large, and have only a few manufactures, for in all this level district there is no coal, or none near enough the surface to be worked.

The eastern parts of the plain, near the coast, are as flat as the prairie. They were once marshes, but are now drained



A LOWLAND RIVER.

by great ditches or canals, and the land is all divided into farms. The farmhouses look very solid, with their stone or brick walls, and very cosy as they stand in the midst of their gardens and old orchards. The villages are very pretty; such villages we have seen only in pictures. We notice the low whitewashed houses, with red tile or straw-thatched roofs, and almost covered with roses and creepers, the quaint churches, centuries old, and the wide village green with its shady trees. Everything seems complete; there is nothing new or half finished about them. The country looks as if the people had settled there a long time ago, and had cleared

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WINDSOR - I.E.
(From the picture by J.)

all the land that they want cleared. But we know that when Julius Cæsar first saw England, it was covered with dense forest.

As we come to the more mountainous parts, it is a different England that we see. The Welsh mountains in the west, and the Pennine ridge which forms the backbone of northern England, are made of various kinds of hard rock. These



THE BLACK COUNTRY.

rocks belong to an earlier age than the coal measures, and they stand as if pushed up through the coal-bearing rocks. All round these hard mountains we find the coal measures resting against their slopes, and the coal is near enough to the surface to be worked. It is on the fringes of these hills, therefore, that we find the great coal-fields of England and Wales.

Here, then, is where the wealth of England lies, for it is coal, and the manufactures born of coal, that have made a capital city like London possible in so small a country. But wealth and beauty do not always go together, and as we draw near the smoke-begrimed "Black Country" we wonder whether the gains have been worth the loss. Here are huge mounds of black pit refuse, tall chimneys pouring out volumes of smoke and poisoning the air for miles round, great pit-head engines at work, and at night the glare of many iron-smelting furnaces. Parts of it look as if the country had been wrecked and scorched by earthquake and volcano, and were only held together by the steel bands of the railways that spread their network over all.

But when we stop at any of the busy hives of industry which have sprung up over the coal and iron fields, we find that things are not so bad as they look. It is this busy northern England—Birmingham with its metal industries, Lancashire with its cotton mills, Yorkshire with its woollen factories, and Newcastle with its shipyards—that really make up England to-day in population, in wealth, and in intelligence. In these great cities of the north men and women and children have bright and happy homes, even although the sky is not so blue overhead as it once was. The public buildings are massive and often very beautiful, and there are plenty of schools and churches, and museums and art galleries.

When we pass beyond this belt of busy factories, leaving the region of coal-bearing rocks and reaching the up-standing core of hill and mountain, we come to yet another England, the land of sheep-farms, which made England long ago the home of woollen manufactures. In our day, of course, most of the wool is imported from Australia and South Africa, but we still see thousands of sheep grazing on the green slopes of the Pennines, and cosy old farmhouses nestling in their sheltered dales or valleys.

In the western angle of this part of England lies the famous Lake District. This is one of the playgrounds of England. The pure mountain air, the lofty peaks and purple moors,



THE CITY OF NEWCASTLE.
View from the picture on page 10. Taken by the photographer of the Maine State and Museum.

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“Land of the Mountain and the Flood” 287

the green wooded valleys, the streams and waterfalls, and the charming lakes, draw thousands of visitors from all parts of the world. It is a small district, less than fifty miles across, but we soon learn in the Old World, if we did not know it before, that greatness is not to be measured by size.

We have no time to visit the other mountain districts of England. Wales with Snowdon, the highest peak in the country, and its quarries of slate, would be worth seeing; so would Cornwall and Devon, with the mines where the Phœnicians came to buy tin so long ago, and the lonely heath-covered moors where flocks of shaggy ponies run wild. But we must push on to see the northern part of the island, the ancient kingdom of Scotland.

“Land of the Mountain and the Flood”

AS we journey from England into Scotland, either by way of Berwick on the east coast or by Carlisle on the west, we are sure to think of Scott's description of it:—

“Land of brown heath and shaggy wood,
Land of the mountain and the flood.”

In the southern part of Scotland, the old “Border” district of many a stirring ballad and story of old, we do not see much of its mountains or its heath. We see only pleasant green hills, with a few dark rounded summits of a higher level, and many a moorland stream that makes us long for our fishing-rod and basket.

The district is a great sheep-farming country, with mixed farming in the lower ground. In the river valleys are fields of oats, barley, and wheat, turnips and potatoes, hay and clover. Higher up on the slopes flocks of sheep feed on the natural grass of the hills, and here and there we come upon a lonely cottage, the home of a shepherd, whose watchful collies give us a noisy welcome. This Border land is neither highland nor lowland; it has a charm and a character

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all its own. Sir Walter Scott has made the Highlands famous in his books, but he chose the Tweed valley for his home.

The central plain of Scotland, north of these uplands, has always been the most important part of the country. It was so in former days, because it contained the best agricultural land. It is so to-day, because it contains the chief coal-fields. Farmers can send their wheat to those who need it, however far it may be, but manufacturers find it best to build their factories close beside the coal which is used to run their machinery.

In this central belt stands Glasgow, the second city of the



BRIDGE OVER THE CLYDE, GLASGOW.

Empire, girt by a ring of manufacturing towns, which form the "Black Country" of Scotland. The river Clyde, which less than a century ago could be waded at low water, has been deepened and improved for shipping, and we may see great Atlantic liners at its quays embarking hundreds of Scottish emigrants for our far West—men and women such as Canada welcomes to its shores. All along the river-sides we hear the ceaseless clang of hammers, for there are more ships built on the Clyde than anywhere else in the world.

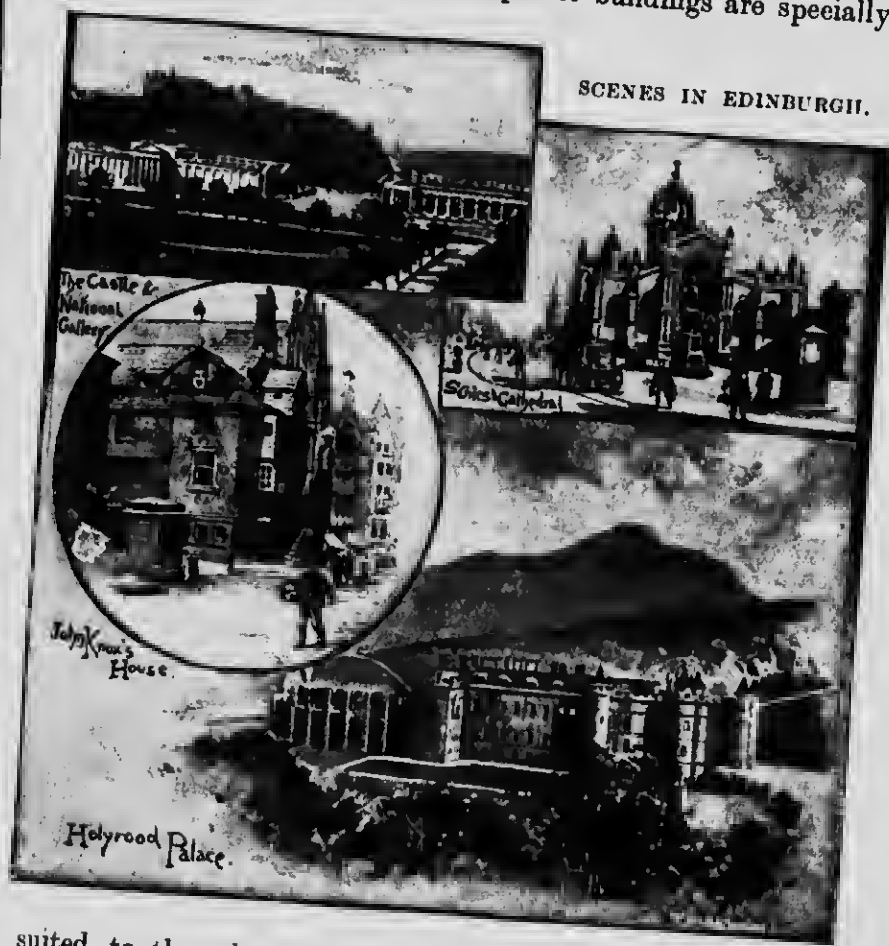
In the central plain stands Edinburgh also, the capital of Scotland, but on a site so hilly that it has scarcely a level street, while its ancient castle on a lofty rock stands

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"Land of the Mountain and the Flood" 289

sentinel over all. Visitors from every land agree in calling Edinburgh the most beautiful city in the world. It has streets too narrow and houses too high, and crowded with too many people, as every city has, but its situation is magnificent, and many of its public buildings are specially

SCENES IN EDINBURGH.



suited to the places where they stand. Edinburgh has a great University and many colleges which draw students from all parts of the world; Canadians, Australians, South Africans, Indians, Chinese, Japanese, and others, meet in this northern capital to receive their education.

290 "Land of the Mountain and the Flood"

Standing on the Castle Rock, or on the top of Arthur's Seat, and looking northward over the Firth of Forth, we can see on a clear day a long blue ridge of mountains. This is the southern front of the Highlands; there lies that "land of the mountain and the flood" of which the poet sings. It is the home of a different race from that of lowland Scotland. To this day Gaelic is spoken in most of the Highland glens.

These northern mountains remind us much of our own Rockies; parts of the Fraser, the Thompson, and the Bow rivers might be Scottish Highland streams somewhat enlarged; but instead of the pine forest we find in Scotland the "brown heath" or heather, which in autumn makes the hillsides a glory of purple bloom. These hills are of little use except for rearing small, hardy, black-faced sheep, and there are great areas which are too bare of pasture even for these. The Highlands, however, have become one of Britain's playgrounds. Its lower moors are the home of the grouse, the favourite game bird of the country. The more remote mountains and glens are kept as deer forests, uninhabited except by a few men who act as wardens or gamekeepers during most of the year, and in the shooting season as "stalkers" and "gillies."

The Scottish Highlands and the Western Isles or Hebrides had formerly a much larger population, and there were homesteads in many a valley now left to sheep or to deer. The people were forced to leave, in some cases because they could not make a living on the barren soil, in others because the landowner wished to make it a sheep-run or a deer forest. There are parts of Canada which, as we have seen, were settled by those Highlanders, such as Red River, the cradle of the province of Manitoba, and parts of Ontario. No doubt it was better for their children and their grandchildren that they came to the great West, but we can imagine what a terrible wrenching of heart-strings it was to the older people, for no man loves his home-land with a love as strong as that of the Celt:—

The Emerald Isle

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"From the lone shieling and the misty Island,
Though leagues divide us, and a world of seas,
Yet still our hearts are true, our hearts are Hieland,
And we in dreams behold the Hebrides."

The Hebrides is the general name of all the islands on the west coast. If we have time to sail along this coast, we shall be struck by its resemblance to that of British Columbia. There are the same steep hills and narrow winding inlets, with a fringe of islands lying off the indented shore, but all on a much smaller scale. One of the smallest of these islands, Iona, is the island of St. Columba, the first Christian missionary in Scotland. Beside the gray ruins of a small but ancient cathedral church we may see more royal tombs than Westminster Abbey can show, for this was the sacred place of the old Celtic Kingdom of Scotland.

The Emerald Isle

IRELAND is divided from the west of Scotland by a strait only thirteen miles wide, and a sea-crossing of little more than forty miles will land us in Belfast, its chief manufacturing town. Wherever we travel in our tour through Ireland, we notice the rich green meadows and pastures from which it has been called the Green or Emerald Isle. Lying out in the Atlantic, in the track of the warm south-west winds and their ocean drift, it has a climate both milder and more rainy than that of Great Britain. Trees and flowers flourish in the south-west of Ireland which grow nowhere else in the British Isles.

From whatever side we approach Ireland, it seems a country of mountains, but when once we reach the interior we find that it is really a low plain. The mountains lie for the most part near the coast, and the surface of the country is like a shallow basin. We may cross the central plain from Dublin to Galway, a distance of over a hundred miles, and see nothing worthy of being called a hill.

Ireland owes its greenness not only to its heavy rainfall, but also to its relief, which prevents the rain from running off as quickly as it would do in a country whose hills lie in the middle. In the central plain there are slow-moving rivers, spreading out into shallow lakes, and there are also great expanses of flat marshy bogs. The decaying moss makes a soft black soil or turf which is cut into blocks and dried, and then forms a fuel called peat. There is little of either timber or coal in the country, and peat is the fuel most used by the peasants.

From its want of coal-fields, Ireland is not a manufacturing country. Its few manufacturing towns are on the east coast, where coal can be cheaply imported from England or Scotland.



DUBLIN CASTLE.

Belfast, with its huge factories and shipbuilding yards, looks like another Glasgow or Liverpool. Many of the largest ships afloat, the great Cunard and White Star liners which cross the "Atlantic ferry" every week, were built in Belfast.

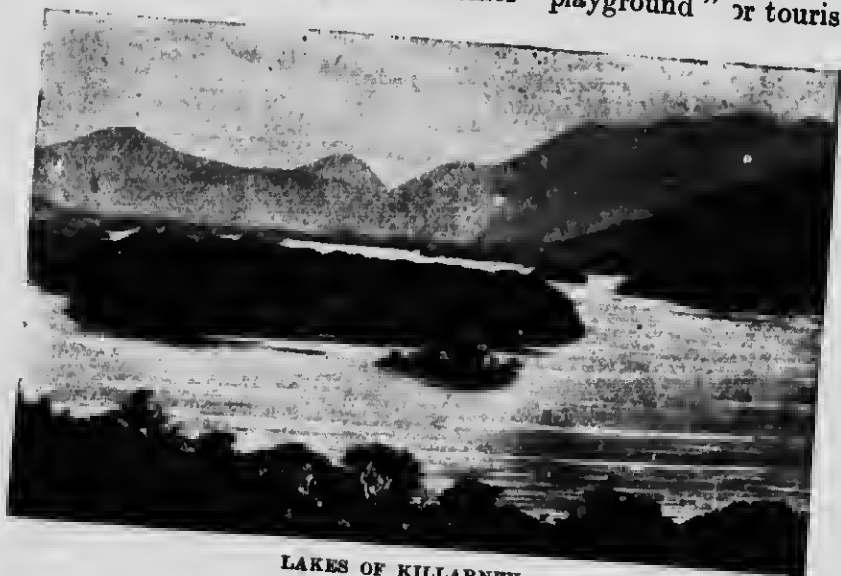
The factories of Belfast are mostly linen factories. All over the north of Ireland we may see in early summer fields of a plant bearing dainty blue star-like flowers. This is the flax plant. In autumn we do not admire it so much; it has been cut down, steeped in a shallow stream or pond until the green bark of the stem is rotten, and then spread out on the ground to dry, and the smell which comes from it in this state is by no means pleasant.

Dublin is the capital of Ireland. It has some fine streets

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and public buildings, but we see little sign of wealth or prosperity. There does not seem to be so much energy or hard work as there is in Belfast. We find the people most friendly and charming, however, and they seem quite content to have things as they are without troubling to make them any better.

Ireland was a Christian country long before England or Scotland, and was famed as the Isle of Saints. In the counties near Dublin we find some very interesting ruined churches. Many of these have curious round towers, probably built nine or ten centuries ago. The chief "playground" or tourist



LAKES OF KILLARNEY.

centre of Ireland is Killarney, in the far western mountains. The scenery is not so rugged and grand as that of the Scottish Highlands, but the rich green hills, the sweet island-studded lakes, and the ivy-clad ruins make Killarney one of the loveliest spots in the world,—“beauty's home,” as the poet calls it.

As we travel over the country, we see that Ireland's chief wealth lies in her farms. The climate does not suit wheat, but barley and oats and green crops grow well, and potatoes have long been a famous crop. But the kind of farming most

in favour is cattle-rearing, and no country is better fitted for this than the Emerald Isle with its rich pasture land.

For many years back the small farmers in Ireland have been better cared for by their government than those in any other part of the United Kingdom. Not only are they helped to buy their farms from the landlords, but the government tries to teach them the best ways of managing their farms and marketing their produce, as our government does at home. This is very different from the treatment of Ireland in former times, when so many of its people were forced by poverty to cross the Atlantic.

The people of Ireland are of the same race as the Highlanders of Scotland. The old Irish tongue was a form of Gaelic, and in parts of the country, especially in the west, this Celtic tongue is still spoken. Many of the people wish this language to be more widely used, and to be taught in the schools, and even in Dublin we may notice the street names in Irish as well as in English. There are many old books written in Irish, but at the present day the number of people who can read them is not great.

But it is time for us to leave this interesting kingdom, with its frank, warm-hearted people. We shall return once more to London, and this time we follow the mail route, in order to save time. From Kingstown, near Dublin, a service of swift steamships crosses the Irish Sea to Holyhead, in the north of Wales. Thence, by a fast and comfortable express train, we cut straight across the midlands of England, finding ourselves back in London nine hours after leaving the Irish capital.

Now we have made our "duty call" on our kinsfolk in England, Scotland, and Ireland, and we are ready to proceed on our European journey. The "Old Country," as we call it, is really part of Europe, and in long past ages it was joined to the Continent by a low plain. But a shallow sea now flows over that plain, and this "silver streak" has had much influence in making the British Isles different from the other countries of Europe, and in leading to the growth of that freedom and self-government which we inherit.



THE CITY OF VENICE, ITALY.
(From the picture by J. M. W. Turner, R.A.)

EUROPE

A Bird's-eye View of Europe

LET us study the map of Europe for a few minutes, just to form some idea of where we are going and what we may expect to see. We notice that most of the high ground in Europe is towards the south. The principal mountain chains lie near the Mediterranean Sea. Then we observe a great plain, which runs from England, under the North Sea, and across the whole of Europe and Asia. To the north-west of this plain we see a second ridge of high ground in Norway and Sweden, which seems to be a continuation beyond the sea of the Scottish Highlands.

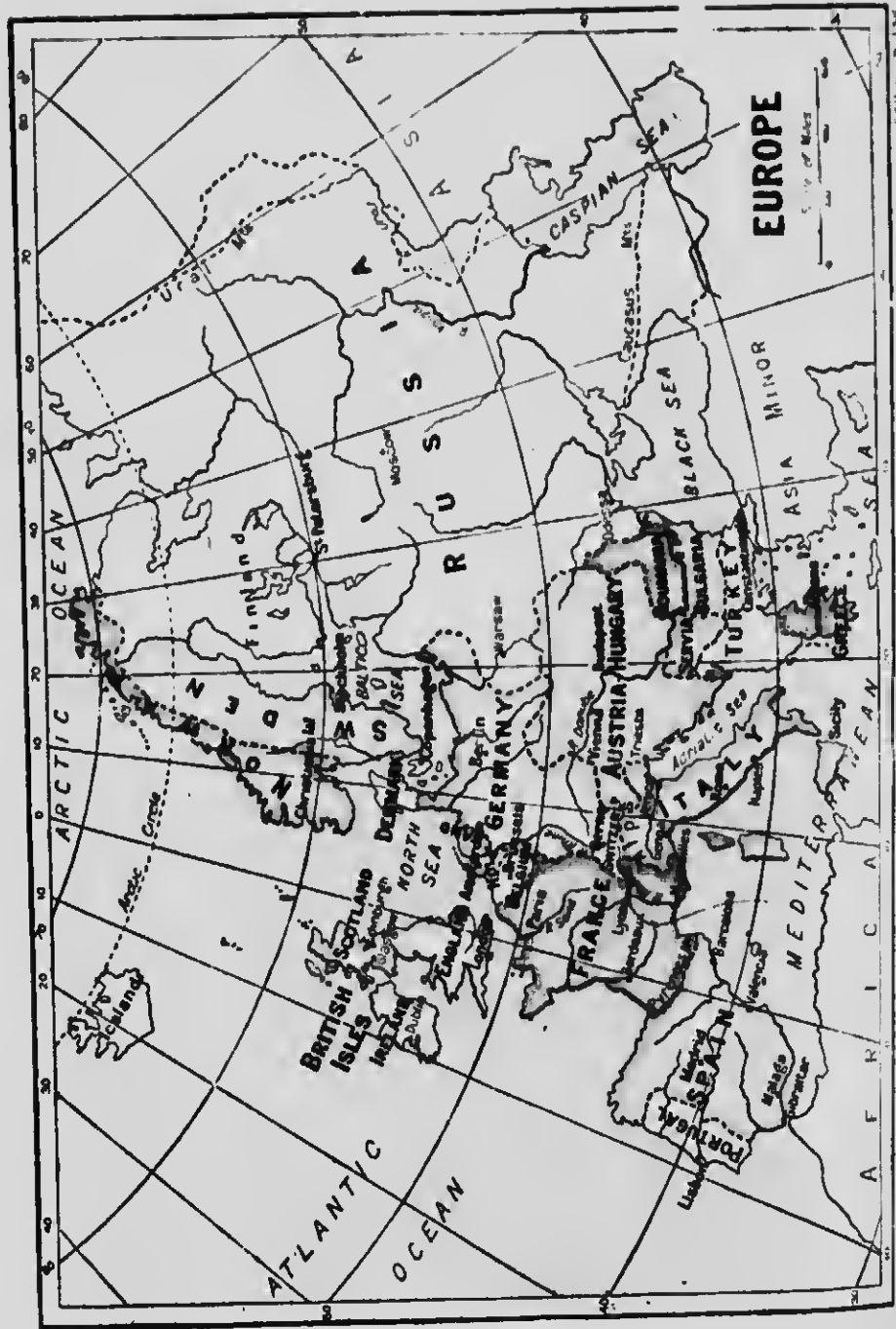
The first of these divisions, from the mountain region to the Mediterranean, forms what we may call the warm belt of Europe. There is no hot belt, properly so called, for the whole continent lies well within the temperate zone. Yet when we come to visit the countries of the south we shall find that they differ much in their products and even in their peoples from the lands to the north of the mountains. All this region lay within the old Roman Empire, and the languages spoken in it to-day are derived from the Latin or Roman tongue, except in the east, where the language of ancient Greece mingles with the speech of the Turkish invaders who conquered the Greek or eastern half of the Roman Empire.

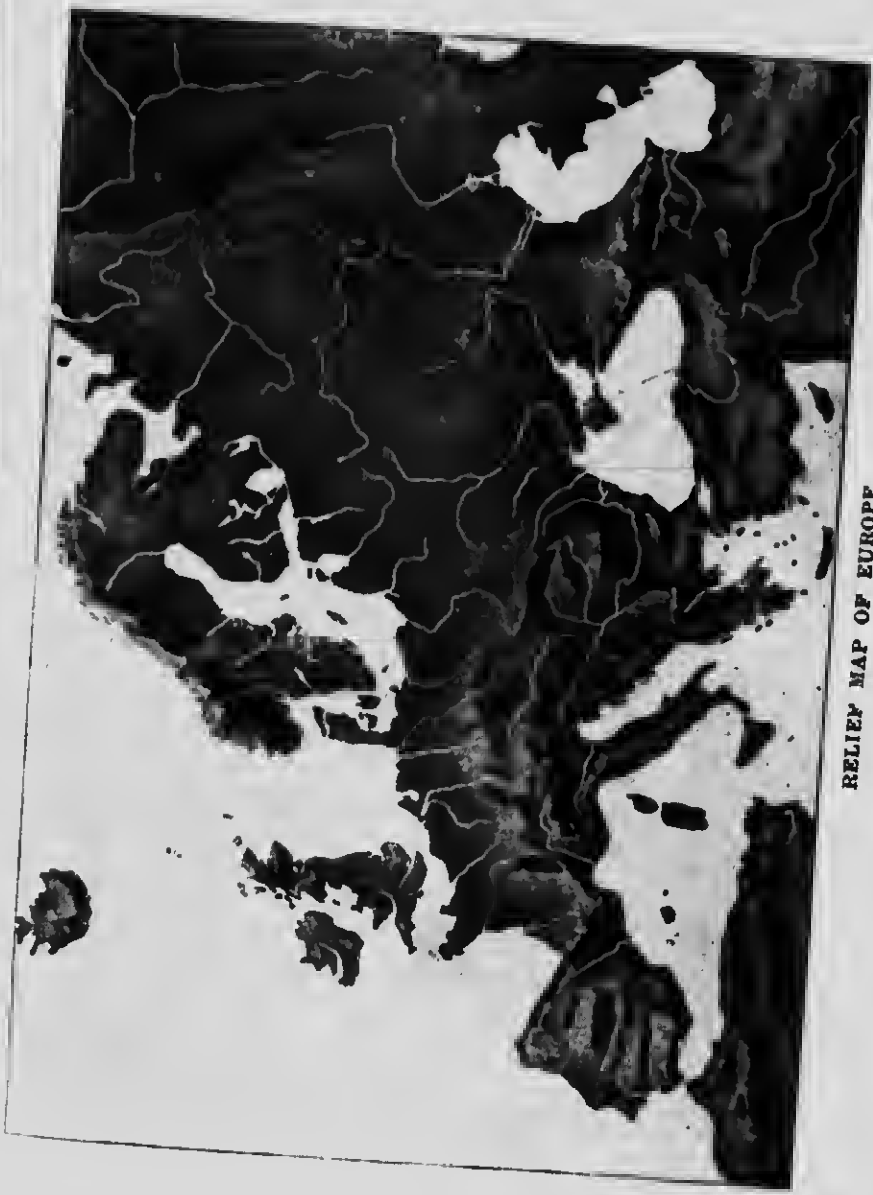
The middle belt of Europe is cooler and more temperate. In the west, in France and the North Sea countries, "Atlantic

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RELIEF MAP OF EUROPE.

298 A Bird's-eye View of Europe

weather" gives a copious rainfall and a mild climate. Eastward the climate is of a more continental type with a smaller rainfall, and more extreme degrees of heat and of cold. In Russia we find conditions very like those of our own central prairie regions, while its northern parts are distinctly Arctic in climate.

The northern or Scandinavian mountain ridge enjoys a climate much milder than we should expect from its latitude. This, as we have seen, is due to the influence of the Atlantic drift. In Norway the people are able to grow barley even within the Arctic Circle, that is, farther north than Labrador or the Klondike gold-fields.

There are thus two great climatic influences which determine the productions of the various European countries and the kind of life which is lived by their peoples. The first influence is that of latitude. This tends to give warmth to the southern lands and cold to the northern. The second great influence is the mild winds and the abundant rainfall which come from the Atlantic. This gives the countries of the west mild winters and temperate summers, suitable for all kinds of crops; while the eastern countries have little rainfall, hot summers, and bitterly cold winters. We must keep these two influences in mind if we are to understand what we see during our journeys. However rich may be the soil, it needs a sufficient rainfall to make it produce the food crops which are necessary to support the life of man, and it also needs sufficient warmth and sunshine to ripen these crops.

One more general fact must be remembered. In Europe there are no savage races. Everywhere there is what we call civilization, or a type of social life which shows intelligence and skill in work, and a desire to deal fairly and even kindly with others. Civilization is really a product of temperate lands. The changing seasons bring harvest fruits only once a year, and men must have foresight to provide food for the winter and seed for the springtime. The cold weather makes shelter necessary, and so has developed skill in the manufacture of clothing and the building of houses. As each land yields

only a few natural products, men have learned to exchange the goods of one land for those of another; thus trade and commerce have arisen, with all the progress in manufactures and means of communication which these have brought in their train. Such a civilization as ours could never have arisen in tropical lands where Nature feeds her children daily without labour on their part. It is in the struggle with Nature for a living that we learn the chief virtues of human life—prudence, courage, endurance, self-denial, and self-sacrifice for the sake of others. By means of this struggle Nature makes us men, and by such means also nations are made manly and strong. It was in temperate Europe, therefore, that there arose the best type of civilization—that type which has been carried oversea to temperate America, and has taken firm root in its new soil.

The Iberian Peninsula

OF all the countries of Europe, Spain seems to have the first claim upon us who live in the New World. It was from Palos, a little port in the south-west of Spain, that Columbus set forth on his search for the Indies, and stumbled upon America instead. Spain was the great sea-power of the time, and she claimed as her own the new-found world in the West. Great parts of it she conquered, and her colonies were dotted over a wide region. To the wealth which she found in her new possessions we may trace the decline and ruin both of herself and of her colonies. The Spain which we now see is not the world-power of four centuries ago, but a second-rate country of Europe.

The Iberian Peninsula, which comprises the kingdoms of Spain and Portugal, is full of contradictions. It is almost an island, and yet has a climate of continental extremes in heat and cold. It lies far out in the Atlantic, and yet is so dry in parts that irrigation is needed to produce crops. It has a long coast-line, but few ports and little shipping. Great parts of its

best soil lie uncultivated, while some of its most barren, rocky hillsides are turned into gardens. It is rich in minerals, but these are worked mostly by foreign companies. It is one of the wealthiest countries in the world in its natural advantages, but its people are among the poorest in Europe, and therefore most ready to fall into disorder and lawlessness. Much of the land is held by great landowners, while the peasants are too poor and ignorant to make the best of what they possess.

Most of the peninsula is some two thousand feet above sea-level, and this is partly the cause of its extreme climate. In the centre of this plateau, in a dusty, wind-swept, parched



THE BULL RING, MADRID.

plain, stands the Spanish capital, Madrid. The small river on which it stands is usually dry, but is at times a raging torrent. The people make many jokes about their river. It must be really a river, they say, because there are bridges over it; but, they add, it would be a good plan for the government to sell the bridges and buy water to put into the river.

North of this plateau are the Pyrenees, a lofty and difficult range of mountains. So completely do they shut off Spain from the rest of Europe that the French have a proverb, "Africa begins at the Pyrenees." There is, indeed, a good deal of Africa about Spain and Portugal, not only in the dry, burning plains of the centre, but also in the palms and other tropical products of the south. For between the high plateau

and the lofty Sierra Nevada of the Mediterranean coast there lies the most fertile part of Spain, the plain of Andalusia, which seems scarcely to belong to the temperate continent of Europe.

The people of the high plateau are mostly farmers, who live by their straggling flocks and herds. The vegetation is scanty, and we see hardly any farmhouses, for the people live in villages and small towns. In summer they drive their flocks to the higher ground, and in the severe winter weather they find shelter for them in the steep river valleys.

In the lower valleys and near the coast the vine is much



THE ALHAMBRA.

cultivated. The steep slopes are cut into steps or terraces, where the plants may be irrigated in dry weather, and fine grapes are grown; yet so scanty is the soil that the peasants sometimes quarry the solid rock and hammer it into sand in order to make soil for their vines.

Much of Spain is bare and treeless, but in the fertile south we find not only the trees of temperate climates, but also forests of evergreen oaks, groves of olive trees, oranges, lemons and pomegranates, and even date-palms and bananas. Here also are grown rich crops of Indian corn, and in many parts rice is cultivated. The cotton plant and the sugar-cane grow in the low ground. Esparto grass is a favourite crop in the south, because it grows without much trouble. This was long

used for weaving ropes, baskets, nets, and carpets, but its chief use now is for making paper. Its fine tough fibres make a much better paper than the wood-pulp of our northern forests. If Spain were cultivated as it ought to be, the country could support in comfort a population three times as great as that which now draws a scanty living from its neglected soil.

Twelve centuries ago Spain was overrun by the Moors or Saracens, an African people, Mohammedans in religion. They established in the south a kingdom which lasted for centuries, and it is only some four hundred years since they were finally driven out. They were a cultured and artistic race, and have



GIBRALTAR.

left behind them many fine buildings in the towns of southern Spain. The most famous is the Alhambra, or "red castle," the palace of the ancient kings of Granada.

The Spaniards are a pleasant people to visit. Even the beggars—and there are many—speak with a politeness which is too rare among ourselves. They are light-hearted and merry, always ready for a holiday, and fond of dancing in the open air. Every town has its "bull ring," a great circus where the people gather on Sunday afternoons to witness their national sport of bull-fighting—a cruel sport, as we think, but kindness to animals is not one of their good qualities.

As British subjects, we find a special interest in the extreme

southern point of Spain, where the Rock of Gibraltar juts out into the Mediterranean. Here for the last two hundred years Britain has maintained one of her many outposts of Empire, and the fortified Rock has been a key to keep open to her navy the inland seas. The face of the Rock bristles with heavy guns mounted in cave and covered galleries. At its foot is a small garrison town, its streets swarming with soldiers and sailors, for its safe harbour is a station for ships of war. On this rock we find a little more of Africa, for we may see the Barbary ape, the only monkey which is found in Europe.

Italy.

THE next country we are to visit is Italy. On our way we pass the Mediterranean coasts of France, which also belong to the warm region of Europe—the dreary flats of the Rhone delta, and the sunny slopes of the “azure coast,” where the mountains dip down into the sea, scarce leaving space for road and railway. We pass by the gay towns of the Riviera, where wealthy people from all over Europe find a winter playground. But France, on the whole, does not belong to the warm or Mediterranean belt of Europe.

Italy is a land richly favoured by Nature. We may be surprised, however, to find that the best part of it is not in the sunny south, but in the extreme north. Here the snow-capped Alps rise like a lofty wall to shelter the rich plains of Lombardy and Venice. No cold wind blows here, like the chilling “mistral” of southern France. The winds which come down from the north are like the Chinook winds of our western prairie; leaving their load of snow and rain on the mountains, they become warm and dry winds on the plains.

The peninsula of Italy is much less hot and arid than Spain. Its mountains form a single ridge or backbone running throughout its length, and the rain-clouds which blow in on either side carry their moisture into the centre of the country instead

of dropping it near the coasts as they do in Spain. Yet the rainfall becomes scanty as we go southwards, and the hillsides are better fitted for pasturing sheep and goats than for cultivation. In the far south, indeed, the want of summer rains forces the flocks to travel from place to place for pasture, and the people live the life of wandering nomads, like the Arabs of the far east.

Rainfall is a matter of less importance in the north. It is a land of lovely lakes and never-failing streams, fed by the melting snows of the Alps. On the mountain fringe almost every valley has its lake, shut in by the moraines or heaps of earth and stones which were carried down by the great glaciers of long ago. Of all these lakes, Como is the most renowned. Not only is it exceedingly beautiful, but the climate is delightful, and invalids from colder lands throng to its shores to enjoy the balmy, health-giving air.

Let us fancy ourselves out for a row in the soft moonlight of a summer evening. The air is cool after the glowing heat of the day. The placid water shines like silver under the full moon, but the hills are dark with mysterious shadows. The whole scene is hushed with a profound stillness, and the only signs of man's presence are the twinkling lights along the water's edge. The town of Como lies behind us, a clustered swarm of glow-worm beams.

The steam-boat trip in the morning is no less pleasant. We do not need the awning overhead, so fresh is the morning air upon the lake. A few sails dot the water, and everywhere are long rowing-boats with a tent-like canopy over one end. Soon we reach a bend in the lake, and the roofs and towers of the city of Como are hid from view. With every curve of the ever-curving shores, other roofs and towers, no less beautiful and picturesque, are brought into view. The voyage is like sailing up a winding river, so narrow is the expanse of water lying between the hills. Wherever these hills do not descend sheer into the lake, a pretty town nestles on the brink; or if not a town, then a villa, or even a cottage, if there is room for nothing more. Many towns climb half-way up the heights,

and the green hills, covered with vines and olives, are dotted with peasants' houses to the very crest. The lake stretches far up among the Alps, and as we draw near its upper end the scenery becomes more stern and grand. The mountains grow loftier, and by-and-by wear light wreaths of mist and snow. Our voyage stops at a sleepy little village; it is midday, and a hurning calm fills the broad valley beyond, out of which a marshy stream oozes into the lake, while the brilliant sunshine glitters on the snow-crowned hills.

In the afternoon the steamer moves slowly out upon the lake again, bearing us homeward now to Como. As the day wanes we watch the shadows creeping higher and higher on the hills, while their tops are still bathed in the warm light of the setting sun. From the villages on the shore we hear through the open windows of the factories the songs of girls winding yellow silk on their humming reels. Then at last we step silently on shore, regretting only that our golden day on Lake Como should end so soon.

These sunny slopes are well wooded. Forests of chestnuts provide a food which is much used by the peasants, and the olive-trees yield a valuable oil. The mulberry is much grown, not for its fruit but for its leaves, which are used for feeding silkworms. Silk is one of the chief products, and the country people often turn their cottages into incubators for hatching and rearing the greedy white caterpillars which spin those precious cocoons of yellow silk. The winding, spinning, and weaving of the silk gives employment to hundreds of women and girls in all these northern towns. Down in the plain we find rich cultivated ground, irrigated from the rivers, and bearing several crops in the course of the year. Wheat is ground into flour and made into macaroni, which we may see hanging up to dry in the open air. Indian corn grows well, and forms a cheaper food for the country folks, while the flooded rice-fields near the river-sides give an almost tropical air to the landscape.

The Alpine streams bring down much silt and mud with them in their rapid courses. It is this which has built up

this fertile plain, where once there must have been an arm of the sea. In the seaward part of this plain the River Po is confined by dikes to prevent flooding, and it cannot now spread its load of silt over the valley. In its own bed the mud is still being deposited, and the level of the river has gradually risen above that of the ground near, while the dikes have also been raised to keep it in its course. In this part of the plain, occasional floods are a hindrance to agriculture, and we find instead broad rich pastures. It is here that the famous Italian cheeses are made, the Parmesan and the Gorgonzola which are found all over the world.

The rivers of northern Italy have not ceased their work of carrying the Alps gradually into the sea. Their brown floods are ceaselessly filling up the Adriatic, forming great deltas at their mouths, and building up sandbanks and islands. When Italy was invaded by barbarians far back in the fifth century, some refugees found a secure home on a group of these islands and among the lagoons and marshes which fringe the coast. On the islands they built their city, though the walls of their houses had to be supported on piles driven into the sand, and this city came to be one of the most beautiful in the world, the city of Venice. By the skill of her people as sailors, Venice became not only a city but a powerful state. Her merchants were known from England to China, and through their hands passed most of the wealth of the Indies.

“There is a glorious City in the Sea,
The sea is in the broad, the narrow streets,
Ebbing and flowing, and the salt sea-weed
Clings to the marble of her palaces.”

Venice is sea-born. From the sea it looks like a dream-city, and as we approach it we half expect to see it fade away like a vision of the night. It is built in the sea, and has the sea for its streets and highways. The builders of old Venice piled their palaces and temples on islands, and knit the islands together with bridges, that they might be safe from the attacks of their enemies. And in seeking to make their city strong, these old builders made it wonderfully beautiful.

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The main streets of Venice are still the canals which separate the islands, although by means of the bridges we can walk anywhere through the city on foot. The favourite conveyance for visitors is the gondola. Steam launches and motor-boats are taking the place of the gondola, but there is a charm about this old-world boat which these cannot possess. The gondola is a flat-bottomed boat, finely shaped, and often beautifully decorated. It floats lightly upon the water, and is as easily propelled and managed as a canoe. The gondolier stands at the stern of the boat, looking forward, and his single oar



THE GRAND CANAL, VENICE.

rests on a high rowlock on the right side. He does not row, or scull, or paddle; his method is peculiar to himself. He begins with a long, strong push, when he throws the force of his whole body into the stroke; then he drags the oar slightly in the water, in some way all his own, so as to keep the boat straight before giving a second stroke. This gives a slight sidewise motion to the boat which is not unpleasant. It is difficult to learn the art of using an oar in the Venetian fashion, and very easy for the beginner to lose his balance; probably few have played at being a gondolier without getting a ducking.

There is much to see in Venice which we must leave out of our programme, but some things cannot be omitted. So we hail a gondola, and presently are gliding towards the many-domed Cathedral of St. Mark. Soon our boat is tied to a red and black striped post, and we climb the marble stairs of the landing-place and gaze on one of the grandest buildings in all the world. The Venetians of old lavished their wealth upon it, and meant it to be, as it is, the glory of their proud city.



"BRIDGE OF SIGHS."

In the square in front of it we see hundreds of pigeons, which flutter down on the chance of being fed. We pass on to the wonderful palace where the rulers of Venice lived in splendour during the days when the city was wealthy and strong, a republic in itself. Between the palace and the dungeons on the other side of a narrow canal is the famous "Bridge of Sighs," across which many a pale prisoner passed to his doom.

But we must stay no longer in this fair city of the past—for Venice is now but a shadow of her former greatness. In the Middle Ages she was the London of Europe—the centre of trade and commerce. The time came, however, when a sailor of Portugal found the sea-route to the Indies, and this proved the death-blow to Venice. Her quays were deserted, and her decay began. Yet for the beauty that remains she may well be called "The Pearl of the Adriatic."

In this rich northern region of Italy are many other towns whose palmy days are long since past, but whose beauty yet remains. Like Venice, they were the capitals of rival states, when as yet there was no united Kingdom of Italy. One of these is Milan, whose white marble cathedral is adorned with some six thousand statues, and fretted with countless pinnales.

Milan also possesses the famous picture of "The Last Supper," by Leonardo da Vinci. And not the smallest of its charms is the marvellous view it commands of the Alps.

Westwards across the Apennines, on the Mediterranean coast, stands Genoa, the birthplace of Columbus, and long the rival of Venice. It is still a busy sea-port, as in the days when the boy Christopher dreamed of setting sail for the West. At its quay we may see ships being laden with all the products



MILAN CATHEDRAL.

of Italy—wine, rice, olive oil, silk and marble—and within its long breakwater lie some of the large steamers which carry so many Italian immigrants every year across the ocean to New York.

But we must glance at the peninsula or southern parts of Italy as well. Starting from Genoa, we soon reach the famous marble district of Italy—Carrara—and we meet on the road heavy wagons drawn by slow teams of oxen, and loaded with the pure white blocks within which may lie hidden statues of great beauty, to be set free by the master-hand of an artist.

Now the Apennine ridge sweeps back from the sea, and we enter the valley of the Arno. Here, as in many other parts of Italy, the marshy ground near the sea is a hot-bed of malarial fever, and we quickly seek the upper part of the valley. In passing, however, we glance at the old town of Pisa, once a port, but now cut off from navigation by the shallowing of the river. Pisa is famous for its "leaning tower," a massive round campanile or bell-tower beside its cathedral. It looks as if it were falling, but it has stood firm for centuries in that position.

Florence, in the upper valley of the Arno, is one of the



CATHEDRAL AND LEANING TOWER, PISA.

most interesting and most beautiful towns of Italy. Standing amid the green uplands of the Apennines, with the huge dome of its cathedral rising above the clustered roofs of ancient palaces and modern houses, and its many quaint bridges spanning the river, it shows fair as we approach it from any direction. It possesses many priceless works of art, relics of a time when its palaces were the homes of rich and powerful nobles, for Florence was in the Middle Ages one of those city-states whose history is so romantic.

In southern Italy we find fewer cities and a more sparse population, for the want of summer rains makes the land less productive. Yet we see fruits such as the fig, orange,

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lemon, and in the far south even the date, which do not flourish in the north on account of its winter colds. Much of the high ground, once forest-clad, is now stripped of its timber, and this has helped to make the climate still more dry and the lands less fertile than they formerly were.

Two cities in southern Italy claim a visit—Rome and Naples. Rome, the "Eternal City," formerly the "Mistress of the World," has been the capital of Italy since Italy became a united kingdom, in 1870. Its story, as we find it in legend and in history, goes back nearly two thousand years. Rome



ST. PETER'S, ROME.

was the capital of an empire which held sway over nearly the whole of the known world, and we can still see the ruins of splendid temples, palaces, theatres, baths, tombs, and statues. The Roman Empire lost its power and passed away, but Rome still held its place; for it was now the capital of Christendom and the residence of the Pope. Great churches were built, and adorned with carvings and paintings, which still remain. St. Peter's is the greatest church ever built. Beside it is the Vatican, the palace of the Pope, which covers thirteen acres, and, besides the private living-rooms and gardens, contains great halls, picture galleries, chapels, libraries, and museums filled with priceless treasures of art. The most

majestic of the ruined buildings of Rome is the Colosseum, a huge circus where eighty thousand people could witness the fights of gladiators and the other cruel sports of the time. We may walk through the ancient Forum, an open square surrounded with splendid ruins, where courts of law met and great public meetings were held. Everywhere we see traces of ancient greatness which show that Rome was a worthy centre for so mighty an empire.



NAPLES.

"See Naples and die," say the people of that city, meaning that after Naples one can see nothing else so beautiful. If we wish to admire Naples, however, we had better see it from a little distance. Then indeed the blue curving bay with its sheltering islands of Ischia and Capri, the white fringing city, and the grand mass of Mount Vesuvius beyond, make up a very beautiful picture. But the town itself has narrow, ill-paved streets and few fine buildings to admire.

Vesuvius is an active volcano. We may see a cloud of steam and volcanic dust drifting from its crest like smoke from a chimney. At night this cloud shows red in the glow of the

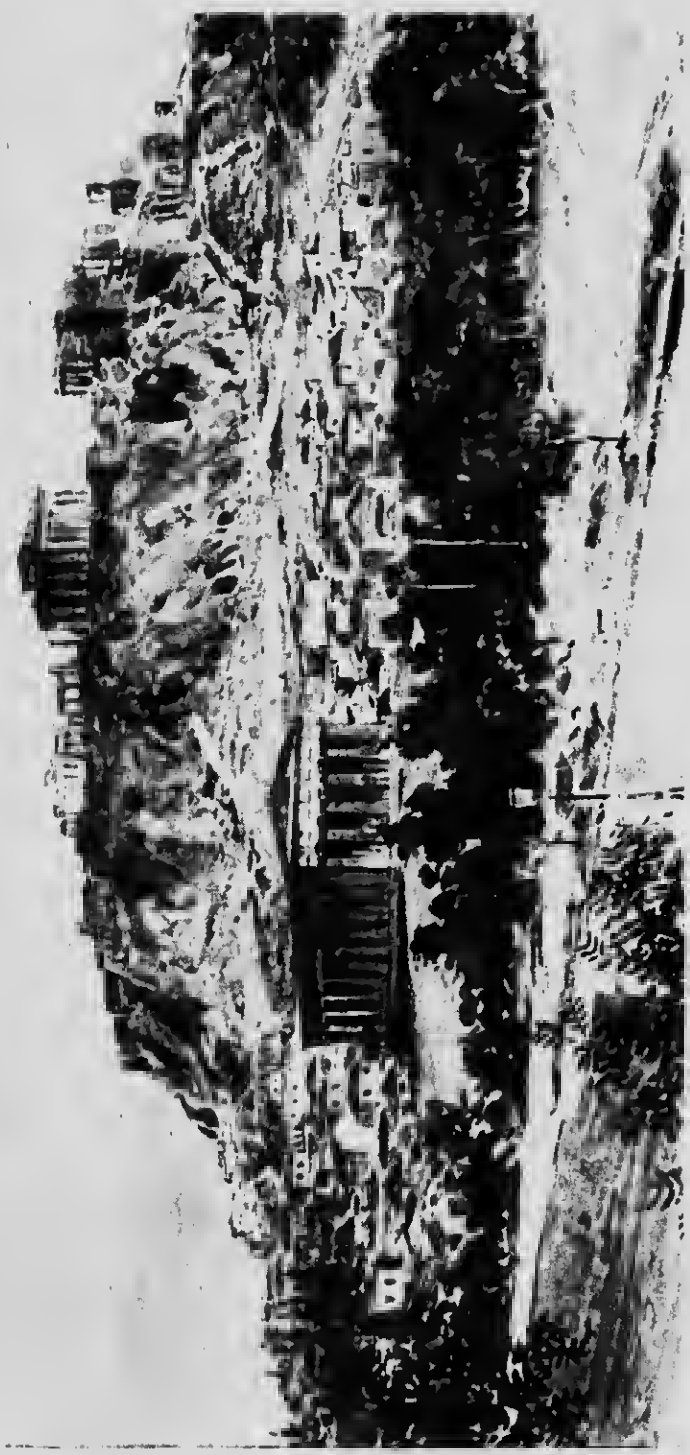
hot lava in the crater below. At times the lava overflows and causes great destruction, and violent earthquakes occur in this district. Eighteen hundred years ago two great cities were overwhelmed with the stones and ash which the volcano sent forth. At one of these, Pompeii, excavations have been made and the volcanic matter cleared away, and we can see exactly how a Roman town looked in those distant ages.

As we travel through this sunny land, we find the people kindly and helpful, but we are met by beggars everywhere. The people are poor, and have heavy taxes to pay. In some parts they are too indolent and easy-going, but the Italians are, on the whole, hard-working people. Many of our Canadian railways and other great works have been constructed by Italian labourers. When they have earned some money, most of which they save, they return to their beloved native land and are looked on as rich men ever after.

The Balkan Peninsula

BEYOND Italy lies another peninsula, which is known as the Balkan Peninsula. This also belongs to the warm zone of Europe, although the central part is mountainous and therefore cool. It is only in the south, the little country of Greece, that we find the products of the warm Mediterranean lands in any abundance.

Greece is a land of lofty promontories and deep sheltered bays. Its towns are never far from the sea. Its people have always been great sailors and merchants, and in early times they planted colonies all round the eastern Mediterranean. Yet Greece never became a great united power like Rome. Her colonies and even her cities at home were each a separate little state. Sometimes they combined against an enemy, but more commonly they were at war with one another. The greatness of Greece was in her literature and her art. Long before the birth of Christ, Greek poems and plays and



THE ACROPOLIS, ATHENS

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books of various kinds were written which are still studied as models. Greek temples and statues are among the treasures of the world, and have never been equalled in beauty. Greece was easily conquered by Rome, but the Greek language conquered a great part of the Roman Empire; it was studied in Rome itself, and it was the language in which the New Testament was written.

When Greece lost her freedom, she seemed also to lose her skill and her taste in art, and became of little importance in the world. During the Middle Ages she was conquered by the Turks, and fell into a still lower condition. Less than a century ago she regained her freedom, and is now an independent kingdom. The modern Greek is a keen trader and much at home upon the sea, but of the literature and art of his country in ancient times he knows no more than we ourselves.

Athens, the capital city, is a place of pilgrimage to many who know its history and admire its art. Round the steep rocky hill of the Acropolis, which keeps guard over the city, are the remains of some of the most beautiful buildings the world has ever seen. We may gaze upon the marble ruins of the Parthenon and other temples, and visit Mars Hill, where St. Paul preached.

There are few important towns. Most of the land is hilly, only affording pasture to sheep and goats, but the plains, where sufficiently watered, yield Indian corn, cotton, wine, olive oil, figs, tobacco, and other products of warm lands, and silk is also produced. The best known export is currants; these are small dried grapes, which get their name from the city of Corinth. The people on certain parts of the coast are employed in fishing for sponges.

The seas round the shores of Greece are thickly studded with islands, many of which are famous in ancient story and legend. On one of these, Paros, is quarried the beautiful white marble from which the great sculptors of old carved their wonderful statues. The isles of Greece are little fairy-lands. Snow and frost are almost unknown except upon the



CONSTANTINOPLE.

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mountain tops, and the heat of summer is tempered by breezes which blow across the deep blue seas. All the flowers and fruits of the sunny South flourish among them. Some are mere rocks, given over to sheep and goats; others are large, and contain towns and villages. Most of the islands are mountainous; nearly all have good harbours, now almost deserted, though in ancient days they were full of ships.

Passing northwards, from Greece into Turkey, we see rich plains fringing the *Ægean* Sea, interrupted by mountain ridges and bold cliffs, until we reach the great city of Constantinople. This is hardly a European city; it is the beginning of the East. Formerly the capital of the Eastern Empire, or what we may call the Greek half of the Roman Empire, it is now the head of another Empire, that of Turkey. It is one of the most beautiful cities in the world, and is splendidly situated on the inlet known as the Golden Horn. Like most oriental cities, it is fairest when viewed from without. The streets are narrow and rough, and badly kept. The houses seem to turn their backs upon us; we see only blank walls, while within are beautiful courtyards and gardens, hidden from the public eye. The men we meet wear baggy trousers, a gay sash and embroidered jacket and a red fez. They spend much time sitting cross-legged smoking long pipes and drinking coffee. All the household work is done by slaves. The women scarcely ever go out of doors, and when they do they wear veils which cover the face and permit only the eyes to be seen.

Among the Alps

WE are now to see something of that middle belt of Europe which is cut off from the Mediterranean slope by a broad region of mountains. The centre of this mountain region is a group of lofty ranges known as the Alps. The Alps are the highest mountains in Europe, Mont Blanc

rising to 15,780 feet. They are probably the best known mountains in the world, for they may be called the playground not only of Europe but of America also. The best known parts of the Alps lie within the country of Switzerland, and we will join the stream of visitors to this pleasant land.

The Swiss are intensely fond of their native country and its mountains and valleys, and every man is trained to bear arms in its defence. Though it has only an area less by one



MONT BLANC RANGE.

fourth than that of Nova Scotia, it is a republic, consisting of twenty-two independent states, in which four different languages are spoken.

Switzerland has become a land of hotels, most of which are open for part of the year only, and great sums of money are spent by the annual swarm of visitors. Some of these come for mountain-climbing. Many travel for the sake of the scenery and the fine mountain air. Far up in the valleys there are hospitals where invalids go to gain health and strength, sleeping out in the open air, and enjoying the perfume of the

pine woods. Even in winter Switzerland has its visitors. In recent times it has become the fashion to spend there a winter holiday, in such sports as skating, tobogganing, and racing on *ski* or Norwegian snow-shoes. In the upper valleys the winter climate is like that of Canada ; there is keen frost, but brilliant sunshine and a dry, healthy atmosphere.

The Alps are like the Rocky Mountain region on a smaller scale, with their lofty peaks, snow-fields and glaciers, quiet lakes, and never-failing streams. But in Switzerland the visitor can climb to the top of many of the peaks by means of a mountain railway, and find on the summit a comfortable



MONASTERY OF ST. BERNARD.

hotel. The mountains are crossed by three main lines of railway, and no people in the world have shown themselves better road and railway engineers than the Swiss.

Before the railways were made the crossing of the Alps was dangerous, and many travellers perished in the snow. Hundreds of years ago a monastery was built at the summit of the Great St. Bernard Pass, and ever since that time devoted monks have spent their lives in that desolate region, ready to help wayfarers who need food, shelter, or aid. The monks usually enter the monastery at the age of eighteen, and remain for fifteen years, by which time they are quite broken down by the terrible weather which they have to endure. In the awful winter storms their great St. Bernard

dogs are sent out to search the roads for travellers who have been overcome by cold or fatigue.

In the upper valleys the people live chiefly by their herds of cattle. In summer these are driven far up the mountains to feed on the little patches of upland pasture. The young people of a village or district live in wooden huts on the mountain side along with their cattle, and spend the long days in watching their flocks and making cheese from the milk, until autumn calls them home. Down in the valley the houses are dotted here and there on the slope, looking like dolls' houses beside the great forest and the lofty mountain peaks. There are few gardens and no fields, for nothing but grass will grow at this high level. The grass is carefully cut and made up to hay while the cattle are up on the high pastures; and a very sweet fodder it makes, for there is plenty of water, and the sound of running streams is everywhere.

Towards the north the mountains sink down into lower ranges. Here the valleys and plains are fertile and well cultivated, and vines and southern fruits grow in many places, but cattle, sheep, and goats are still the farmers' chief wealth. Switzerland is a great dairy country. One of its chief exports is condensed milk, and so much milk is used for this manufacture that in spite of all the cattle we see, butter must be imported to supply the summer needs of the country. It is in this more level part of the country that Bern, the capital, Zürich, and the other large towns are situated.

The people of this mountainous little country are extremely intelligent and industrious. Their schools have long been among the best in the world. Although there is no coal in the country, many kinds of manufacture are carried on, and water-power is easily obtained from the swift rivers. Watch and clock making has long been a favourite industry in the large towns, especially Geneva. Wood-carving is done by the peasants in their homes during the winter. In summer a large number of the people are employed in attending to the thousands of tourists who crowd the hotels and swarm all over the country.

“ La Belle France ”

THE Alps form, as we have seen, the centre of the mountain region of Europe. When we turn to the westward we find that the Alps dip down steeply to a narrow valley, the Rhone valley, and beyond this lies a large mass of high ground, filling the south-east corner of France. The nearer edge of this mass is called the Cevennes Mountains, and the centre is a plateau with many weather-worn cones of ancient volcanoes, the mountains of Auvergne. From this mass the surface of France slopes gently westwards to the Bay of Biscay and northwards to the English Channel and the great European plain.

France is a country of great extent and great variety, and it is not easy to form an opinion about it during a single short visit. The land is very well cultivated, and mostly divided into small farms. The people are social and friendly; they like to live in a village rather than in a solitary farmhouse, as we have seen in the French parts of Canada. The French are sometimes called gay and frivolous, but this is a great mistake. In Paris and other cities where holiday visitors gather, there is plenty of gaiety and amusement. Even in the villages, after the day's work is over, the people like to meet their neighbours at some favourite café, and spend an hour or so in social chat. But when we get to know the people by living among them, we find that they are very hard-working and industrious, taking few holidays and wasting nothing. The mother is usually a splendid house-manager, and the parents' highest ambition is to provide well for their children. We find in France much variety of soil and also of climate. The people, too, seem of different races. In the south they are lively and somewhat hot-headed, like their Italian and Spanish neighbours; in the north they are more cautious and slow, and show their kinship to the English.

The Mediterranean slope belongs to the warm belt of Europe, as we see by the olive groves and other southern products.

The country bordering on the Bay of Biscay is of a different type. The low meadows are fringed with sand-hills thrown up by wind and sea, and large tracts have been planted with pines. On these dreary plains great flocks of sheep are fed. The shepherds have fallen upon a curious plan for being able to see and to follow their scattered flock. They strap to their feet long stilts to raise them above the grass and bushes, and carry a long stick in their hand which can be used as a support. When resting, they look as if they were mounted on a tripod.

Near the Gironde estuary the manufacture of wine is the chief occupation. It is here that the red wine known in English as "claret" is produced; the French people call it Bordeaux, after the chief town in the district. Some of the vineyards are very large, and are fitted with modern machinery.

Farther to the north lies the valley of the Loire. This is the richest part of France, and the centre of much of its history. Here are the finest of the old castles or *châteaux*—palaces, we might call many of them—where kings and nobles used to hold their court. They are now either empty or in ruins, but they are well worthy of preservation as works of art.

The western angle of France is called Brittany. The Bretons are of a race akin to the ancient Celtic inhabitants of the British Isles, and still speak their own language and keep up many of their old religious festivals. The Bretons are the best sailors and fishermen of France. Every year their fishing fleets seek the stormy seas of Iceland, or the better known grounds off Newfoundland. Their land is somewhat hilly and bare, but such fruits as the apple and the strawberry grow in great abundance. We must call at the old Breton town of St. Malo. Its massive old walls still stand complete, reminding us of the city of Quebec, and its narrow streets and tall houses with shuttered windows remind us of it still more. As we walk round the walls, we come upon a statue bearing a familiar name—Jacques Cartier. Then we remember that it was here that Jacques Cartier was born, and from the rocky bay at our feet that he sailed on his great voyage

"La Belle France"

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which made known the St. Lawrence to Europe, and so laid the foundation of New France and of its capital, Quebec.

To the north-east of Brittany we come upon the broad river Seine, winding among the hills and forests and across the plains of Normandy. Normandy in many places reminds us of England, with its solid farmhouses, deep hedges, apple orchards, and green pastures dotted with fine herds of cattle and troops of horses. Towards the north we see chalk cliffs and pebble beaches, as on the other side of the Channel.



A PARISIAN BOULEVARD.

The people as well as the countries are akin. Normandy is the land of the Normans or Northmen—Vikings from Norway and other northern lands, who conquered this part of France long ago. Once settled here, they soon became good Frenchmen, and a few centuries later they sailed across the Channel and conquered England also. For a long time thereafter England and Normandy were under the same rule, and the peoples were closely connected. To this day the Englishman feels more at home in Normandy than in any other part of France.

The Seine is a great highway of traffic. Seated on the

balcony of some river-side inn, we may watch the passage of a constant stream of shipping. No bridge bars the way until Rouen is reached,—the "Manchester of France," as it is called on account of its cotton manufactures. Above Rouen the stream of traffic becomes a procession of great barges, which can pass underneath the many bridges and carry heavy goods up to Paris or beyond it. The north is the chief coal-mining district of France, and there too are most of its manufacturing centres, as we should naturally expect.

On the Seine stands Paris, the capital of France, and the best known playground or holiday city of the world. It is



CATHEDRAL OF NOTRE-DAME, PARIS.

the largest city on the continent of Europe, the centre of fashion, and the home of many arts. The French people are proud of their capital, and have adorned it with noble buildings, handsome streets, and spacious squares and gardens.

The palace of the Louvre is full of wonderful art treasures, gathered from all parts of the world and belonging to all ages. Adjoining it are the beautiful

gardens of the Tuileries, where stood another royal palace. The cathedral of Notre-Dame stands on an island which once contained all Paris; it is six hundred years old, and its front is a mass of beautiful carving. One charming feature of Paris is its boulevards, broad tree-bordered streets, lined with innumerable cafés which are much frequented by Parisians and visitors alike. The spacious city, with its gay and active people, and its bright clear skies, invites the visitor to spend much time in the open air, and there is little of the "shut-in" feeling which sometimes makes one long to leave the city behind and flee to the open country.

Up the Rhine

TAKING our stand once more on the Alps and looking northwards, we see the mountains sinking down towards the great plain which borders the North Sea and the Baltic. We notice a deep narrow valley running northwards, somewhat like that of the Rhone in the south; it is the valley of the Rhine. Both these rivers rise in the Alps, and not far from each other. The Rhine begins as a mountain stream, but ends as a noble river, pouring its waters by many mouths into the North Sea.



DUTCH LANDSCAPE.

We will now make a pilgrimage up this river from its mouth to its source. The delta of the Rhine makes up a great part of what is called the Netherlands or "Low Countries," the kingdoms of Holland and Belgium. When we start on our voyage we can easily see why this name was given; we find that Belgium and Holland are not only flat, but that parts of them are actually below the level of the sea at high water. On either side of the river are rich meadows, but we can hardly catch a glimpse of them from our steamer. The banks of the river are raised above them like a railway embankment. When we pass a village it is only the church spire and the roofs of the houses that we see.

Great parts of the shallow sea near the mouths of the Rhine

have been inclosed with a strong bank or dike, and the water pumped out by those windmills which we see everywhere in Holland. Soon the muddy flat becomes a rich green meadow or "polder," but it would be filled with water again if the windmill pumps were not kept going. Such land is extremely fertile, and heavy crops and fat cattle are common here. The ground is cultivated like a garden, and the tiny patches of grain or of root crops seem almost like toy fields. There is one kind of farm in Holland which if we see it in early summer we shall never forget,—the farms where flower bulbs of various kinds are grown for sale. The fields are gay with



A QUAY IN ROTTERDAM, HOLLAND.

the brilliant tulip, the sweet narcissus, the heavy-scented hyacinth, and all the endless variety of flowers] which are grown from bulbs. It looks somewhat like playing at farming, but it is a profitable business if managed with skill.

Traffic in the Netherlands is carried on largely by river and canal. We see boats and barges of every shape and size. Many of them have neat little cabins where the owner's family live, and we catch a sight of chubby faces between the dainty white window-curtains as we pass. The barge is steered by a huge wheel placed horizontally near the deck, and on this wheel we are sure to see the family dog sitting as grave and important as if he had sole charge of boat and crew. Dogs are used in Holland and Belgium to draw the small carts in

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which the country folks bring their dairy produce to market. We may see on the road by the river bank a farmer riding home in the empty cart, which his team of two or three dogs seems to draw without much trouble.

We have not time to visit the large towns of Belgium or Holland, though many of them are beautifully built in a quaint, old-fashioned style, and others are busy hives of manufacture; for this is the most thickly inhabited part of Europe. Their fertile soil, their coal and iron mines, and



A CANAL IN HAMBURG, GERMANY.

the skill of their workmen, have enabled these lands to support a numerous population. Some of the largest sea-ports in the world are built at the mouths of the Rhine and the other rivers which flow into the North Sea. These rivers are great highways leading to the central plain with its teeming millions of people, though now the railways help the rivers to carry the burden of imports and exports. Such towns as Hamburg in Germany, Amsterdam and Rotterdam in Holland, and Antwerp in Belgium are centres of a trade which reaches the New World as well as the Old.

Belgium has been called the "Battlefield of Europe."

Here some of Britain's greatest victories were won. If time permitted, we should certainly visit the scene of the Battle of Waterloo, for it was this victory which left our Empire free to expand and develop without hindrance. Waterloo is near Brussels, the gay capital of Belgium, which prides itself on being Paris on a small scale.

But we must continue our river-voyage, which leads us across Holland, leaving Belgium to the south. From the deck of our steamboat we see a constant procession of charming Dutch pictures on land and water. Soon we stop at a small town where we are not allowed on shore until customs officers have



COLOGNE, GERMANY.

examined our luggage for anything on which duty is payable. This warns us that we have crossed the frontier of Holland and are now in Germany.

After a short time the character of the country changes. In place of green meadows and quaint red-roofed villages we see huge factories, tall chimneys, and all the signs of a busy manufacturing and mining district. This is Germany's "Black Country," the centre of her steel and iron industries, and the place where the famous Krupp guns are made. A manufacturing country is never an attractive one, but one uncommon thing strikes us here—all the factories seem new. The fact is that Germany as we see it is really a new country. Her agriculture and many of her inland and upland towns

Up the Rhine

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are centuries old, but her manufactures and shipping trade have arisen in very recent times. In the space of one generation her new outburst of industry has made her the rival of Britain.



RHEINFELS CASTLE, ON THE RHINE.

By - and - by the twin spires of Cologne Cathedral rise before us, the tallest stone building in the world.

When we stop at the quay and approach this huge church, we feel as if it were some great mountain crag rather than a mere building that towers above us. There is much to see in Cologne, and we may have time to visit its fine zoological gardens; we shall certainly look for the old house in a narrow street where the original eau-de-Cologne perfume is still sold. From Cologne to Mayence is the "show" part of the Rhine: the river becomes so interesting that we have no time to think of anything else. The banks become higher, until we at last find ourselves in a sort of canyon. But it is a very mild and beautiful type of canyon, and is full of human interest and human history. It has none of the wild grandeur and savage loneliness of our Western mountains. The river slopes are all cultivated, and houses and villages by the river-side give the landscape a home-like appearance. Where the slope is steep it is cut into steps or terraces, each faced with a stone wall, and on the level strips of soil thus formed we see growing the grapes which yield the famous Rhine wines.



THE "MOUSE TOWER" AND TERRACED VINEYARDS.

Whcrever a steep hill or crag raises its head it is crowned with a castle. Most of these are now ruins. In former days they were the strongholds of the barons and nobles to whom the land belonged ; the only protection for property in those days was the sword, for no one could trust to the laws to save him from the power of a greedy neighbour. Many of the barons were great rascals, and counted as fair spoil whatever they could wring from the peasants or from the merchants who carried cargoes up and down the river. The ruins remind us that violence rules no longer, while they give an air of romantic beauty to the scenery.

When we approach " Bingen on the Rhine," we land on the opposite bank, and make our way by a small mountain railway up through rich vineyards, till we reach the national monument which was erected in memory of the last great German war. In 1870 there was a fierce war between France and Prussia, the chief state of Germany. France was defeated and Paris was captured, and two French provinces on the west side of the Rhine were handed over to Germany. At the same time the king of Prussia was proclaimed as the German Emperor. From this time dates the beginning of a new national life in Germany, the results of which are seen to-day in her manufacturing and commercial progress. No wonder the Germans are proud of this great monument, or that many visitors make a holiday pilgrimage to the hill on which it stands looking out over a wide expanse of the fairest part of the German Empire.

As we sail still southwards up the noble stream, the valley opens out into a fertile plain. On our left rises the distant front of the Black Forest Mountains, and on our right the still more distant line of the Vosges, now the boundary between France and Germany. The plain is green with many kinds of crop—Indian corn, wheat, lucerne, tobacco, and beet, as well as rich deep pasture. It is as level as a prairie, until it meets the dark wooded slopes of the mountains on either hand. We pass many rafts of timber, moving with the current or being towed down-stream. The trees have been felled among

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COLOGNE CATHEDRAL.

the hills of the Black Forest, and floated down its rushing torrents. Now they are formed into long narrow rafts, on which we see the wooden huts of the men who pilot them.

The river now becomes too shallow and rapid for steamships. To complete our voyage some smaller craft will be needed, or we may prefer to follow the rest of its course by land. At the southern limit of Germany we must turn suddenly eastwards, as the river sweeps round the ancient city of Basel. At Schaffhausen it plunges over a ridge of hard rock, in a low waterfall which reminds us somewhat of the Chaudière Falls at Ottawa. Some little way beyond we trace it to the beautiful Swiss Lake of Constance. But this is not its source; that lies far up among the Alps, in a great mountain mass in the middle of Switzerland, and within a few miles of the source of the Rhone.

Our trip up the Rhine has shown us a very small part of Germany, though one of the most interesting parts. Most of that great empire lies to the east and north. The low plain which borders the Baltic Sea forms the northern part. All the south is hilly, rising gradually to the mountain region of Europe. The kingdoms of Bavaria and Saxony and the southern parts of Prussia, have great stretches of mountain and forest. In the valleys stand many of the most famous and most beautiful old towns of Germany, such as Munich and Dresden, rich in art and busy with modern industry. Berlin, the capital of the empire, stands on the plain. In appearance it is a new town, and its fine streets and splendid massive buildings are worthy of a great people. It has very cold winters and hot summers, for it stands far inland from the Atlantic.

In the northern and eastern plains there are many wide stretches of marsh and heath, formerly of little value; but the industrious Germans have planted much of this with trees which will soon yield a rich and profitable crop. Their forest management is one of the things from which we in the western hemisphere might learn useful lessons. The chief grain crop grown on this plain is rye, but much of the land is occupied with sugar beet and flax.

Down the Danube

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We find the people in the north of Germany different from those in the south. The short dark-haired men of the Black Forest, with their slow bullock carts, seem to be of a different race from the tall fair-haired men of the north, who are often very like Englishmen or Scotsmen in appearance, and are quite equal to them in activity and enterprise. Education is greatly valued in Germany. We notice many fine school buildings, and the technical colleges and universities are famous all over the world. Students from our own and other countries go to continue their studies at one or other



BERLIN.

of the great German universities. The Germans believe that the success and prosperity of their empire depends upon their schools and colleges.

Down the Danube

THE river Danube, or Donau, as it is called by the people who live beside it, rises among the wooded hills of the Black Forest. We will employ this active little stream to carry us in imagination on an eastward voyage of

(1,580)

some seventeen hundred miles, in order to gain a few glimpses of the countries through which it flows. It soon grows in volume, and by the time it enters the kingdom of Bavaria it can be navigated by barges and light river craft.

It sweeps across the pleasant Bavarian plains, receiving many tributary streams by the way. Some three hundred miles from its source it carries us into the empire of Austria. It is now a stream nearly eighty yards wide, and sixteen feet deep, flowing through a charming land of flower-starred meadows and dark green forests. On our left are the purple ramparts of the Bohemian mountains, and far away on our right the blue peaks of the Alps.



BUDAPEST.

It is next joined by a large Alpine stream, the Inn, which comes from beautiful Tyrol, the land of high glittering peaks, mighty glaciers, steep stony passes, old pine forests, and rich pasture slopes. Tyrol is the Austrian Switzerland, and draws many visitors in summer. We sweep down-stream with the river thus increased in volume, and it is not long ere we reach the great city of Vienna, the capital of the Austrian Empire. Vienna is the natural meeting-place of some of the chief rail-
way routes of Europe, and is thus a busy city with considerable trade and industry ; it is also a splendid capital, reminding us of Paris and of Berlin, with some charms of its own added.

By-and-by the hills on either side curve round as if to bar our way. The river pushes through a cleft in the mountains

Down the Danube

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called the Hungarian Gate, and when we pass through this we are in the kingdom of Hungary, one of the chief states of Austria - Hungary, or the Austro-Hungarian

monarchy, as this united empire is called.

Shortly after we enter the Hungarian plain our river divides into

several channels, flowing round a number

of green, fertile islands known as the "Golden Gardens." Fifty miles

further, and the Danube makes a sudden bend southwards, bringing us to the capital of Hungary, Budapest. It really consists of two towns, Buda and Pest, now joined by bridges across the river.

The Hungarian plain is not part of the great European plain; it is shut off by mountains from the Mediterranean belt on the south, and is also shut off from the great plain on the north by a second mountain ridge. The main part of this second ridge is the Carpathian Mountains, which curve round the north and east of Hungary like a great horse-shoe. The Hungarian plain is one of the richest agricultural parts of Europe. For three

hundred miles or more we shall see ploughed fields and wide pastures, with great droves of horses, sheep, and swine. The villages stand far apart, marked out by their lines of shady acacia trees. The farms produce all the crops of Central Europe,

and the climate is warm enough for Indian corn and for vines. When we have crossed this great basin-shaped plain, we see



A SQUARE IN VIENNA.



THE UNIVERSITY, VIENNA.

our course once more barred by mountains. The river has another gate to pass; this time it is the Iron Gate. For eighty miles the river-course is a mountain gorge. Its waters which were a mile wide when it left the plain, are now compressed into a channel of seven hundred yards, strewn with jagged rocks rising through the foam. A canal has been made to avoid the rapids, and millions of dollars have been spent in engineering works to improve the passage for steamships.

At the Iron Gate we leave Austria-Hungary behind us. It is a curious empire; in no other country of Europe are such a variety of peoples joined under one government. No fewer than ten languages are spoken, and four different alphabets are used among them. The country as well as its inhabitants shows great variety. We have seen its rich agricultural centre. North of this, among the hills which border Germany, lies the chief industrial and mining part of the empire. One of the minerals found is rock salt, and the great mines are visited by many tourists. To the east, the Carpathians form a truly mountainous country, though they do not rise above the snow-line and contain no glaciers. In the south, on the other hand, the empire has a short coast line on the Adriatic Sea, with a truly southern climate, and products of the Mediterranean type.

Beyond the Iron Gate our course is smooth sailing. The Danube now sweeps across a vast plain, its steep banks often reminding us of our own prairie rivers. Here and there the river splits up into several streams, and as it approaches the Black Sea its branches become more numerous, and the flood-plain over which they wander becomes wider and wider. Finally it enters the sea by several mouths, its delta being over a thousand square miles in area. We do not find this lower plain quite so interesting as that of Hungary. The country was long ruled by the Turks, and though it is now organized into a number of kingdoms more or less independent, the people have not yet reached so high a degree of prosperity as most of the European countries. The plain is fertile, and is

one of the best grain-growing parts of Europe. Yet the winters here are extremely cold; we have reached an outlying part of the great European plain, and the cold winds from the Russian steppes affect the winter climate.

Across Russia

WHEN we leave the Danube and sail out upon the Black Sea, we have to the north the great empire of Russia, of which we are now to make a rapid survey. Russia is a vast unbroken plain, extending from the Black Sea to the shores of the Arctic Ocean. It occupies more than half of Europe. But this is not all the Russian Empire; that empire extends beyond the low ridge of the Ural Mountains into Asia, and right across that great continent to Bering Strait. Formerly it even crossed that strait into North America, for Alaska was long a Russian territory. The empire stretches from east to west over five thousand miles of land, a distance nearly equal to that from Vancouver to London, and in area it is almost equal to the continent of North America.

At present we have to do with European Russia only. The climate is of a continental type throughout, with great extremes of heat and cold, and a small rainfall. It is a land of long river-courses. Most of its rivers rise in a slightly elevated district near the centre, and wander over the plains in all directions, there being no decided slope for them to flow down. One of these is the Volga, the longest river in Europe. It turns this way and that, as if it had lost its way to the ocean; and so indeed it has, for it finally falls into the Caspian Sea, which is merely a great salt lake.

We will now make a journey of fifteen hundred miles over this vast plain from south to north, starting from the peninsula of the Crimea, which juts out into the Black Sea. Here is the only part of Russia which has a truly southern climate.

—a narrow strip at the foot of a mountain range where the trees of the Mediterranean belt flourish, unharmed by winter frosts and snow. It is the Riviera of Russia, and draws many winter visitors.

Leaving the Crimea behind, we enter upon a vast grassy prairie, known as the *steppes* of Russia. Near the Caspian this plain is so dry as to be almost a desert. On the steppes the population is but scanty; we meet wandering tribes of Cossacks with their herds of horses, for among them it is the horse and not the cow that is the chief domestic animal. These Cossacks are Asiatics rather than Europeans. They are a half-civilized race, and live for the most part in tents. They spend much of their time on horseback, and in various ways remind us of the horse Indians of South America. There are no finer horsemen in the world, and the Cossack cavalry are famed for their keenness as scouts and for their swift and dashing attacks.

As we travel northwards we pass from the bare grassy steppes to a prairie more akin to our own, and reach a belt of country which is called the "Black Earth Region," on account of its deep rich soil. Wheat grows splendidly here, and the district is the chief granary of Europe. As the country is poorly supplied with railways, the wheat is floated in flat-bottomed boats to the Black Sea or to the Baltic, the voyage often lasting several months.

As in other parts of Europe, we find the country people living mostly in great straggling villages. They are usually poor and ignorant, and their methods of cultivation might be much improved. Up to the middle of last century the peasants were serfs or slaves. They belonged to the nobles, and could not leave the estates of their masters without permission. In 1861 the Czar, Alexander the Second, set free twenty-three millions of these serfs.

If we peep into one of their houses we shall find it to be a small wooden cabin with an earthen floor. Round the walls are small bunks in which the children sleep, and filling up a large part of the room is a huge stove, on the top of which

the peasants often make their beds. The men are wild and savage-looking, with long shaggy hair and sheep-skin clothing. They are often dirty and noisy, but we find them very good-natured and friendly. In most villages there is a bath-house, for the people are very fond of hot baths. They live mostly on vegetables and "black bread" made from rye, the wheat being all exported.

Beyond this wheat belt we come to the chief industrial



MOSCOW.

centres of Russia. The busiest manufacturing district is near the ancient capital, Moscow, but coal and iron are also found near the Black Sea and elsewhere. The mountains that border Russia, both on the western or German side and on the eastern or Siberian side, are very rich in the precious metals. We must not forget to mention one special mineral product of Russia which is found on the shores of the Caspian, namely, petroleum. At Baku hundreds of wells yield a plenteous flow, and the country for miles round is a dreary desert soaked in oil.

But we must continue our journey. As we go still northwards we find the climate too cold for wheat, and rye, barley, and oats take its place. Great crops of hemp and flax are grown near the Baltic, and also tobacco and sugar-beet. Every natural product which man really needs is found in one part or other of this great country. Its people are little dependent on foreign products, and this is well, for Russia has few good sea-ports. The Baltic is blocked with ice for several months of the year, and the key to the Black Sea, the narrow strait at Constantinople, is in the hands of Turkey.

North of Moscow we find ourselves approaching the great forest belt of the Russian plain, with its endless miles of birch, larch, and fir. This wealth of timber has scarcely been touched as yet, but one day it will yield a rich harvest. Let us hope that when that day comes the Russians will not merely cut down but will also plant and cultivate, so that the present magnificent forest may not be followed by a worthless waste of scrub.

The western corner of this forest belt is very different from the rest. The province of Finland, bordering on the Baltic Sea, is not really a part of the great plain. It is a maze of granite rocks and mountain lakes; one might traverse the province from end to end by boat or canoe. It has great forests of pine and fir, which are the home of the bear, wolf, fox, and beaver. The people are more intelligent and industrious than those of central Russia, and are indeed among the best educated in the world. Their towns were among the first in Europe to be lighted by electricity.

At last we pass beyond the forest belt, and reach what seems to be the end of the world. Dreary plains and marshes, known as *tundra*, stretch round the frozen sea. In spring the snow melts, but beneath the surface the ground is still frozen. The tundra is then a vast swamp covered with Arctic mosses, coarse grass, and a few fruit-bearing shrubs. In summer it is bright with flowers, but it is still an uncomfortable place, for mosquitoes and other winged pests are found everywhere. The inhabitants are few and far between:

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by the help of their dogs and their reindeer, by fishing and trapping fur-bearing animals, a few half-civilized tribes manage to find a living.

We have completed our imaginary journey over the great plain of Russia. A real journey across it is a matter of more difficulty. Great tracts are still untouched by railways, and traffic is carried on by slow river barges, by caravans from beyond the Urals, and by sledges moving over the winter snows. One of the great centres of such traffic is the town of



NIZHNIJ-NOVGOROD.

Nizhnii-Novgorod on the upper Volga, in the middle of Russia. Here every summer a great fair is held for two months. Though the railways and the use of steamboats on the rivers have made this fair of less importance, it is still one of the sights of the world.

The town of Nizhnii is divided into two parts by the river Oka, which here joins the Volga; on the right bank stands the permanent town, a place of nearly 100,000 inhabitants. Across the river is the temporary or fair town; here between the middle of July and the middle of September there gathers

a host of some half a million people, from all parts of Europe and Asia—Chinamen, Persians, Turks, Indians, Germans, Frenchmen, Russians, and Jews—crowding hither to buy and to sell.

Let us join this great procession, travelling by rail to Nizhnii-Novgorod. We make our way slowly from the railway station, through streets knee-deep in sand, and cross the Oka by a floating bridge, which is blocked with traffic from end to end. The fair is a great city of one-storey booths. The crowds which fill its streets are kept in some sort of order by Cossack horsemen in dashing blue uniforms and high caps of black lambskin. The waters of both rivers are crowded with shipping of every kind, and their floating population numbers many thousands.

As we push slowly through the crowds to look at the bazaars and markets; what a medley of wares meets our eye! Everything that is grown, or trapped, or dug, or manufactured, between Ireland and Japan is displayed before us. Here are sheep-skin coats, books and pictures, brass-ware, boots, tea-urns, knives, lanterns, and a hundred other things: there are rich carpets, silks, and heaps of gems, cut and uncut. Salted fish, tea brought overland from China, fruits from the Caucasus, and all kinds of strange foods and drinks are offered as we pass. It is truly a world's fair.

When the time comes for closing the fair, two white flags which fly in front of the governor's house are lowered. The crowds pack up and depart, and for the next ten months this teeming city is empty and silent. The river craft set out on their long voyages, some by steam, some by sail and oar, and some drawn by gangs of men and women on the banks. If we wish a cheap sail down the Volga, now is our time, for the water is low in the river and some captains will carry passengers free on condition that they jump out and push when the steamer sticks in the mud.

The cities of western Europe are becoming very much alike as the years pass, and new houses take the place of old. Russian cities still keep their own peculiar character. The churches

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ST. PETERSBURG.

are foreign-looking to our eyes. Instead of towers and spires, they have curious bulging domes pointed above; these are usually covered with sheets of copper, and are sometimes gilded or painted in gay colours.

The capital, St. Petersburg, is a splendid but rather commonplace city. It is a comparatively new city, and does not look so Russian as Moscow or any of the older towns. Some two hundred years ago the Czar Peter the Great conquered from Sweden the strip of country which then lay between Russia and the Baltic Sea. Having thus got a sea-coast for his country, he began to build a city which would be "a window looking out into Europe." The land was a swamp, but Peter did not mind that. Millions of piles had to be driven into the marshy ground, and thousands of workmen died of fever; but the iron will of the Czar was carried out—St. Petersburg arose. The principal street is a hundred feet wide and more than three miles long, with two wonderful cathedrals and the winter palace of the Czars.

To the North Cape

WE have yet one more region of Europe to visit—that ridge of high ground which rises to the north-west of the great plain. This high ridge forms the long peninsula of Scandinavia, which contains the kingdoms of Norway and Sweden.

Sweden rises gradually in a series of steps from the Baltic, until it reaches the summit of a long mountain ridge, which forms the boundary between it and Norway. This ridge lies across the path of the Atlantic winds, and has a heavy rainfall on its western slope. When these winds cross over it they are dry, and thus Sweden has less than half the rainfall of Norway.

Sweden is also much more continental in its climate than Norway. Its Baltic shores are frozen for several weeks or

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To the North Cape

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months in winter, while the Norwegian coast enjoys the warmth of the Atlantic drift. In summer the conditions are reversed; the Norwegian coast is cool and often rainy, while Sweden basks in warm sunshine.

The south end of the peninsula has much fine agricultural land. We see heavy crops of oats and barley; wheat is also grown, as well as rye and beet. The forests contain a good deal of hardwood, while those in the north are mostly of pine and fir, mixed with birch.

The south of Sweden contains some of the largest lakes in Europe. By means of these and of canals between them, we



STOCKHOLM, SWEDEN.

can make a charming voyage across country from Göteborg or Gothenburg, a large port on the west, to Stockholm, the capital, on the Baltic shore. This voyage brings us past the famous waterfalls of Trollhätta, and afterwards through a rich and prosperous country. Stockholm is called the "Venice of the North." It is built on a number of islands between the narrow entrance to Lake Mälär and the head of a long Baltic fiord, and is one of the most picturesque towns in Europe.

Sweden has long been famous for its iron. Far in the north is a mountain called Gellivara, which is wholly composed of rich iron ore. A railway has now been made from the capital

to this mountain, the first railway to reach beyond the Arctic Circle. This railway has also been extended across Norway to an ice-free port on the Atlantic.

Norway is a poor country compared with Sweden. The richest part of Norway is in the south, in the broad valleys which slope down towards the Skager Rack, and the fiord on which the capital, Christiania, is built. In this region dairy farming is the common industry.

We shall complete our survey of Europe with a voyage along



A NORWEGIAN FIORD.

the wonderful fiords on the west coast of Norway. We find that it resembles our own Pacific coast in many ways. A ridge of blue mountains, forest clad below, but bare rock or glittering snow-field above, stands like a wall on our right. The lower end of each cross valley forms a long bay or fiord, which often runs far inland. All along the coast a chain of islands, which the Norwegians call the "skerry-guard," breaks the force of the Atlantic billows.

When we turn in-shore and make our way up one and another of those magnificent fiords, we find that Norway is a land of

much grandeur and beauty. Sometimes the rocky walls of the mountains plunge sheer down into the water; sometimes there is a narrow fringe of more level ground, where men have built houses and villages. Here we see a farmhouse perched far up the mountain-side on a tiny meadow; on the beach, a few hundred feet below, lies the farmer's boat, the only means he has of reaching the outer world. When he wants a cow, he must buy it as a little calf, carry it up the rocky path from his boat to his farm in the clouds, and wait till it grows. While his children are young, it is not safe for them to play outside the house unless they are tethered like young goats to a strong stake; if one were to lose its footing it might fall sheer down into the fiord.

As level ground is scarce, not a yard of it is wasted. Little patches no bigger than a table-cloth are dug up and planted with potatoes, the bare rock showing on every side. The farmers trust much to their hay, which grows freely in the moist climate. The grass is cut close to the ground, and not a blade is left to wither by the roadside. It is no easy matter to cure the hay, for even in dry weather heavy dews fall at night. The farmers set up fences or hurdles here and there, and instead of spreading their hay on the ground they hang it over the wires of these fences to dry. Every little patch of level ground up the mountain-side is a hayfield. Sometimes the road to one of these is so steep that neither man nor horse could carry down the crop. But the ingenious farmer is not to be beaten. He stretches a strong steel wire from his house to the hay meadow up above; then tying the hay into bundles, he sends it flying down to his barn along this curious hay-telegraph.

Some things that we see in Norway remind us of Switzerland. The farmers send their cattle far up the mountains in summer to the high pastures or *sæters*, as they are called. When we visit a *sæter*, we find it dotted with wooden cabins, in which the farmers' daughters live, and where they make cheese from the milk day by day.

As we sail north along the coast we pass quite a surprising

number of boats and ships. Norway actually stands fourth among the nations for the size of its merchant fleet, and fishing is one of its most important occupations. The country almost drives the young Norwegian into the sea in spite of himself, and he naturally takes to the water for a living. When we see Norway we begin to understand how those Vikings of old were such fearless sailors and terrible fighters, and how they planted colonies in all lands.

Even within the Arctic Circle, civilized men are able to find a living in Norway. The little towns of Tromsø and Hammerfest have a busy fishing trade, the latter being the most northerly town in the world. Up on the plateau, however, there is little but bare rock and dreary tundra, where the reindeer picks up a scanty fodder of moss. Here live the Lapps, a half-civilized nomadic race, quite different from the Norwegians and Swedes. They move their tents from place to place as their reindeer flocks require new pastures. The reindeer forms their sole wealth, and fills the place of horse, cow, and sheep in one.

If our voyage is a summer one, we find it strange to see the midnight sun hanging low and red in the northern sky. But our voyage is near its end. Before us lies the lofty island of Magerö, with a bold cliff 1,000 feet high facing the empty ocean round the pole. This is the place of which "Othere, the great sea captain," speaks to King Alfred, when telling of the first voyage of Arctic exploration:—

"Upon the water's edge
The huge and haggard shape
Of that unknown North Cape,
Whose form is like a wedge."

But it is no longer unknown. Every summer great steamships sail from England and Germany, carrying tourists and travellers, who go to see the Midnight Sun.

We have finished our rapid tour of Europe, from the warm Mediterranean lands to the barrens of the Polar Sea, and now the other continents are calling us.

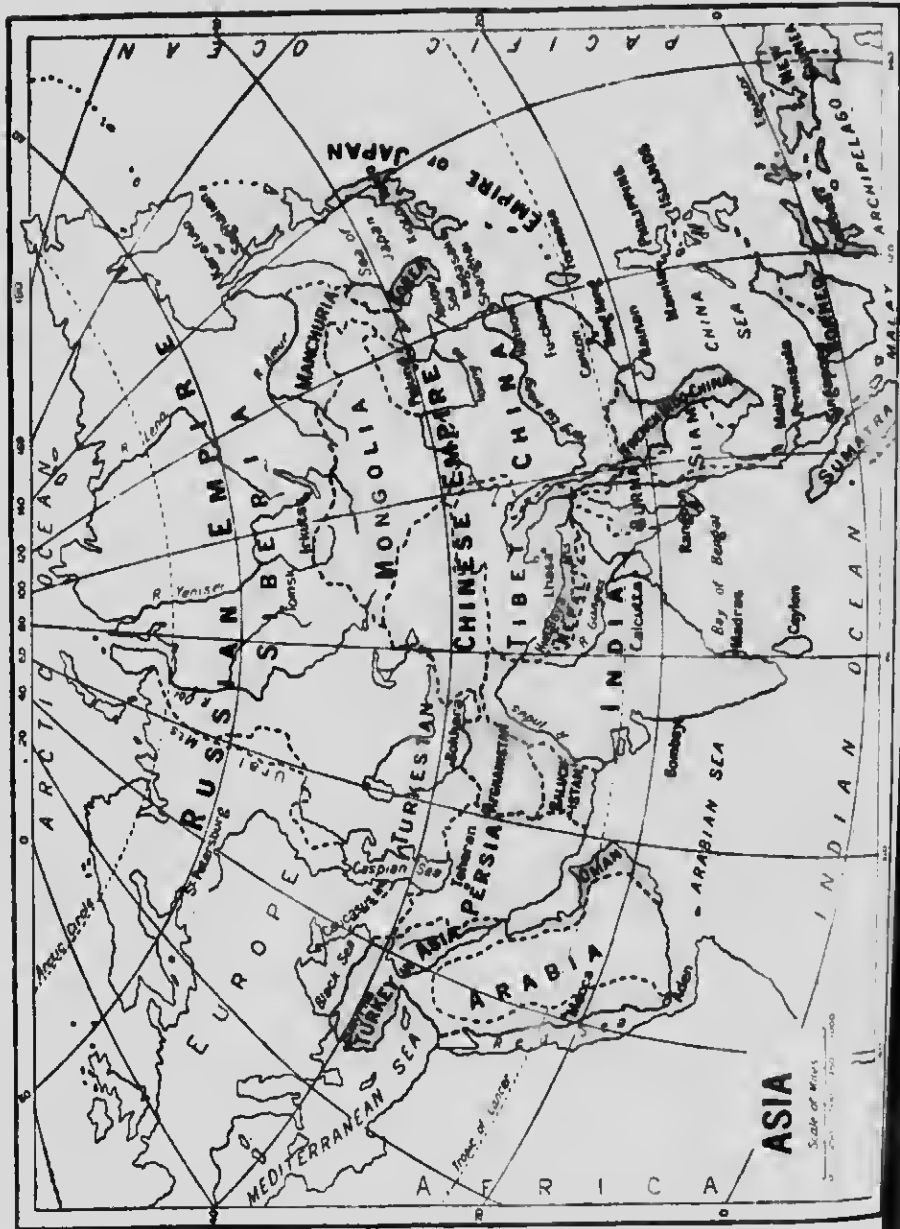
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INDIAN OCEAN
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Fig. 11. Asia, Relief



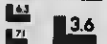
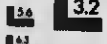
RELIEF MAP OF ASIA.

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ASIA

I

ASIA may be called the mother continent of the world. Within its bounds men first learned to till the soil, tame animals, build cities, marshal armies, make laws, carry on manufactures and trade, record their thoughts in writing, and produce jewels, sculptures, and paintings. From Asia came the earliest forefathers of the most powerful and highly-civilized races on earth. When the rest of the world was sunk in barbarism, Asia was the seat of mighty empires, such as those of Assyria, Babylonia, and Persia, where the deserted ruins of their vast cities yet remain to witness to their ancient grandeur. Asia, too, has been the cradle of the great religions of mankind.

While, however, Europe and the New World have constantly advanced in knowledge, skill, and wealth, Asia has long been either standing still or falling back. The mother continent is now the home of decayed nations, most of which have fallen under the influence of the great European races.

Let us turn to the globe, and for a few minutes consider Asia in relation to the rest of the world. We first notice the vastness of the continent. It is by far the largest of all the continents, and contains one-third of all the land on the globe.

Let us now look at the surface of this continent. When we trace the main mountain chains we see that they converge towards a wild and rugged highland region lying to the north-west of India. So lofty is this region that its inhabitants call it the "roof of the world." Here we find the

centre of the Asiatic mountain system. From this Pamir plateau region, mountain ranges strike off in various directions, like the spokes of a wheel. Two main chains, the Hindu Kush and the Sulaiman Mountains, run westwards, and diverge widely to inclose the high plain of Iran. They meet again at the plateau of Armenia, in a peak more than three miles high. To the north of the Armenian plateau is the vast range of the Caucasus, stretching in a line of snowy crests from the Crimea to the shores of the Caspian Sea; to the west is the high plain of Asia Minor, huttressed on its northern and southern shores by much lower ranges.

Returning to the Pamirs, we find four great ranges striking towards the east. The most northerly of these is the Tian-Shan, which curves to the north-east; it is the first of a series of ranges which continue the mountain line to the north-eastern extremity of the continent. Almost due east from the Pamirs runs the Kuen-lun, which is connected with ranges reaching almost to the Pacific shore. Between the Kuen-lun and the Tian-Shan is a great basin rimmed on three sides by mountains, and pitted with salt lakes. Much of this region is barren, and towards the east it broadens out into the desert of Gohi or Shamo, which is covered in many parts with sand-hills. There is scarcely a trace of vegetation, and no sign of animal life except an occasional lizard.

Together with the Kuen-lun there branches off from the Pamir plateau a range known as the Karakoram Mountains, in which we find some of the loftiest summits and the most extensive glaciers in the whole world. Mount Dapsang is 28,000 feet high, and Mount Godwin-Austen, or "K 2," as it is marked on the Indian Survey map, is still higher. The Kuen-lun and the Karakoram Mountains diverge, the latter bending southwards, and between them lies Tihet, the loftiest and the largest plateau in the world; its average elevation is about 13,000 feet. In the east, the Tibetan ranges turn to the south, and run through the length of the Indo-China peninsula.

The last of the great easterly ranges which diverge from the

Pamirs is known as the Himalayas, or the "abode of snow." The Himalayas curve round in an arc for a distance of more than fifteen hundred miles, and form the most majestic system of mountains in the world. Forty of the peaks rise about twenty-four thousand feet.

The surface of Asia divides naturally into four regions, of which this central region of mountains and plateaus forms one. North of the mountain region we see a vast lowland area, stretching from the Caspian Sea to the Arctic Ocean, and this is really a continuation of the great European plain. Most of it is comprised within the bounds of Siberia; but its south-western portion, near the Caspian Sea, is a distinct region of wind-blown, sandy desert, part of it lying below the level of the sea, with a system of inland drainage of its own.

The third great natural division of Asia consists of the coast ranges or Cordilleras, which border the eastern and south-eastern shores of the continent, and reappear off the coast as fringing islands, cut off from the continent by shallow inclosed seas. Most of these mountains are of volcanic origin, and many of them are active volcanoes. Between the ranges of this eastern division flow a number of great rivers, which are fed by the rains, snows, and melting glaciers of the central mountain region.

The fourth and last natural division of Asia consists of two massive table-lands, one of which forms the peninsulas of Arabia and the other that of the Deccan, the southern portion of India.

II

The climate of so vast an area shows almost every variety which exists on the globe. Asia extends from beyond the Arctic Circle to within ten degrees of the equator. As we should naturally expect from their latitude, the parts near the Arctic Circle are very cold, while the southern peninsulas, which thrust themselves amidst tropical seas towards the equator, are very hot. North-eastern Siberia has the coldest

climate known to us; and the summer heat of Calcutta is scarcely equalled anywhere else.

As the surface of Asia varies in height from the sea-level, or rather from below sea-level, to more than five miles above it, the temperature is greatly affected by these differences of altitude. The countries of Asia differ much also in their nearness to or distance from the ocean. Hence we have great tracts in the interior with a very extreme continental climate, while the coasts, especially in the south and east, have the monsoon weather which we have already described, or a climate otherwise affected by nearness to the ocean.

With respect to climate, then, we may divide Asia into five different zones. The first includes all the northern part of the continent within the Arctic Circle: here we find a climate like that of our own Arctic regions.

The second climatic zone includes the rest of Siberia, with its hot, short summer, and its long and very severe winter. The rainfall in this zone is slight, and the extremes of temperature increase as we travel towards the east.

The third zone includes the parched region extending from the Gobi desert to the interior of Arabia. This region suffers from scarcity of water, and very sudden changes of temperature.

The fourth zone is the monsoon area, which includes India, Indo-China, and the eastern coastal lands, on which rain falls heavily during the period of the summer winds. The northern parts of this zone have cold winters, but the southern parts are hot all the year round.

The fifth zone consists of the Malay Peninsula and Archipelago, the southern part of the Deccan, and Ceylon. In these regions we find the climate always warm and always wet. Instead of saying that they have two dry and two rainy seasons, we ought to say they have two wet seasons and two that are less wet.

III

Perhaps the best way in which to get a general view of the plant and animal life of Asia is to make an imaginary journey

across the continent from the north coast of Siberia to the shores of the Indian Ocean.

In Asia, as also in our own continent, the Arctic Ocean is fringed by a broad belt of Arctic desert known as *tundra*. In the short summer, when its surface is thawed, bright-coloured flowers burst into bloom, and bring a rare but brief beauty to what is usually a dismal desert. The characteristic animal of this region is the reindeer. It is trained to harness, and can draw a sledge across ice and frozen snow. Its milk, flesh, and hide furnish food and clothing; and without their herds of reindeer, the dwellers on those northern wastes could scarcely exist.

Passing southwards, we reach the vast forest zone which stretches from the Urals to the Amur. These great forest regions give shelter to innumerable fur-bearing animals, such as squirrels, foxes, and bears, and to the stag and the wolf. Formerly the ermine, beaver, and sable were plentiful, but they have been so much hunted that they are now rare.

South of the forest zone we reach a tract of mingled steppes and desert, which includes the whole of Central Asia from the Caspian Sea to Manchuria. The steppes vary in the character of their soil and their vegetation. Those which border the forests are well clothed with grass, while those that merge into the deserts are covered with vegetation only during the short moist season. Trees are seldom seen except in the river valleys.

The steppes merge into the desert region of Central Asia. Most of the rivers which flow from the mountains lose themselves in the thirsty sand. In the oases of western Asia the date-palm is the most characteristic tree. Central Asia appears to be the true home of the rose, which in early times spread through Asia Minor to Greece and Italy. The most useful animal to the dwellers on the steppes is the camel, which is found wild in Central Asia.

The lofty plateaus to the south of the desert region are, for the most part, icy wastes, where the scanty vegetation resembles that of the tundra. This part of Asia is the original home of

most of our domestic animals, such as the horse, ass, sheep, and goat. Big mountain sheep with curved, twisted horns, goats with long silky hair, wolves, and bears, live on the mountains, reminding us of the big game of the Rockies.

To the Tibetan the yak is as important as the reindeer is to the people of the tundra. This long, low, heavily-built creature is somewhat like the musk-ox in appearance. It is covered with black hair, which hangs down at the sides in a fringe. As a beast of burden it is very sure-footed; from its rich milk excellent butter is made, and its hair is spun into ropes and woven into coverings for tents.

We now come to the monsoon lands in the south and east of Asia, where there is abundance of heat and moisture, and therefore a luxuriance of vegetation. In India and in Indo-China there is no winter, and plants grow all the year round. In China and in Japan, on the other hand, there is a cold season, when the plants rest, and man is braced up to endure the heat of summer. The lowlands of the monsoon region yield rice, sugar-cane, indigo, and opium; cotton and tea are grown on the hillsides, which are clothed, too, with valuable timber-trees; the islands of the south-east produce cocoa-nut, sago, and spices, such as pepper, nutmeg, clove, and vanilla. Animal life is as luxuriant as vegetable life in this region. In the jungles of south and south-east Asia are the lairs of the tiger, the panther, the wild boar, and many kinds of poisonous snakes. Huge crocodiles live on the banks of the rivers, while jackals, kites, vultures, crows, and termites or white ants do the work of the scavenger. The elephant, which is found wild and is tamed in India and Indo-China, is one of the most useful native animals. The common draught animal is the Indian buffalo. In China and Japan few domestic animals, except pigs and fowls, are kept, as the fertile soil is too valuable for grazing.

Asia Minor resembles the Mediterranean countries of Europe, and has dry summers and wet but not cold winters. Here we find a region which under better government might be one of the gardens of the earth. Fruits such as oranges, lemons,

peaches, olives, figs, and pomegranates, grow very well ; and on the lower mountain slopes we find pines, cedars, myrtles, and evergreen oaks.

IV

Asia is not only the largest of the continents, but it is by far the most populous. The whole world is said to contain more than 1,500,000,000 people, and of these Asia numbers 870,000,000, or more than half. Six out of every ten Asiatics are yellow men, or Mongols, and three of the remaining four are white. Asia is the special home of the Mongol race. The Mongols are distinguished by their yellowish skins, their small, black, slanting eyes, their prominent cheek-bones, their coarse black hair, and their somewhat short stature. Of course there are innumerable varieties amongst these Mongols, but the Chinese and Japanese are the types we know best. In the white group of Asiatics are the Arabs, with their fine features and noble carriage, tall and graceful Persians, intelligent Armenians, and bearded Slavs. The great bulk, however, of this group consists of the people of north India, or the Hindus. The few members of the Black group found in Asia live in the hill districts of southern India, in Indo-China, and on the southern islands.

The enormous population of Asia is not spread evenly over the continent. Vast spaces are quite uninhabited, and most of the people are crowded into the fertile lands. In the monsoon countries, which extend from Japan to India, we find eleven out of every twelve of the people in Asia. Three fourths of the people of India, which alone has a population of 298,000,000, are farmers, and live on the vegetable foods which they grow. They are, therefore, dependent on the regular occurrence of the monsoons, which bring the rain. When these winds fail in strength or are delayed, whole districts become barren deserts, and thousands of people die of famine.

India

I

WE must now undertake a few journeys through Asia, in order to see the land and its peoples. The area is so vast, and our time so short, that we can only choose a district here and there as a sample of the rest. Our best plan will be to begin with the southern monsoon lands, and move gradually northwards. By doing so we shall find ourselves among friends at the beginning of our journeys, for the great empire of India is part of our British possessions. There we shall find ourselves at home under the old flag.

The great highway to India starts from London. If we fear the stormy seas of the Bay of Biscay, we may cross over to France and make our way to Marseilles on the Mediterranean Sea, where our ship will call for us. Thence a sail of fifteen hundred miles brings us to Port Said, at the entrance to the Suez Canal. The passage of the canal is very wearisome. On both sides of us is the unending desert, and all that breaks the monotony is the occasional appearance of a few slow, patient camels plodding through the sand. We steam along slowly, and at night an electric search-light gleams from our ship and illumines the narrow waters which lead to Suez, at the head of the Red Sea. Suez does not detain us, for it is an unattractive, unhealthy place.

Our ship is now in the Red Sea. On the port side is a bare wall of rose-coloured, sun-scorched rock, unbroken by harbour or river-mouth, and fringed with coral reefs and islets. Behind this coast-line extends the lofty, rugged plateau of Arabia. The heat is intense; we sleep on deck, but even there we find little relief.

By-and-by we reach the narrow strait of Bab-el-Mandeb, or the "Gate of Tears," where Britain has two sentinels to guard the entrance to the Indian Ocean—the powerful fortress of Aden, on a volcanic peninsula of Arabia, and the rocky islet

of Perim, lying in the narrowest part of the strait. As we draw near to Aden, Somali boys row out to our vessel in their frail dug-out canoes. We toss coins into the water, but they have scarcely begun to sink before they are snapped up by the diving boys. Aden, we find, is somewhat similar to Gibraltar. There is a great mass of bare, towering rock rising out of the sea, and connected with the mainland by a low, narrow neck of land. Most of the inhabitants live on the



THE MARKET-PLACE, ADEN.

peninsula, which really consists of a huge extinct crater walled in by precipices. Within this crater is the town. It is not a pleasant place to live in; the heat is very great, and water is so scarce that it is bought and sold. Almost everything needed to sustain life in Aden has to be imported. As we might expect, the market-place is very busy, and is always crowded with laden camels. Despite all its drawbacks, Aden is a valuable possession, not only because it guards the sea-road to India and is a great coaling-station, but because it is a very important trading centre between Arabia and Africa. Aden

is really part of British India, for it is under the government of Bombay.

We now leave the Gulf of Aden, and push on at full speed across the Arabian Sea, as this part of the Indian Ocean is sometimes called, for we have nearly 2,000 miles of water to cross ere we land at the famous port of Bombay, and find ourselves at last in the ancient land of India.

II

We step ashore at the landing-place, and at once the East greets us with a rush. Bare-legged men in turbans and spotless



A STREET IN THE EUROPEAN QUARTER, BOMBAY.

robes are awaiting the landing of their masters. We hire a carriage, and are driven through what appears to be a fine modern town, with public buildings, gardens, statues, and well-stocked shops. But to us the chief interest of the city lies in its wonderful colour and the variety of its people. Bombay, like all Indian cities, gives us the impression of a land crowded with teeming life. The population of India is vast—one fifth of all the earth's inhabitants dwell in the land. The people swarm like ants, but ants clad in the most brilliant of colours. We see men wearing

purple hoods, scarlet gowns, bright green turbans, crimson cloaks, orange tunics, and brilliantly white cotton garments; while everywhere there is a background of bare brown skins, black hair, gleaming eyes, and glistening white teeth.

Let us visit the bazaar, or quarter of the native shopkeepers. Here we find ourselves in a tangle of narrow streets, lanes, and alleys, littered with decaying refuse, sickly with unfamiliar odours, and crowded with a rabble of people. The



A STREET IN THE NATIVE QUARTER, BOMBAY.

shops are merely small open booths, and in them the merchants squat amidst their wares. Round them are baskets, brass dishes, and pots containing articles for sale. Above the shops are the wooden houses, unsteady, shaky-looking places, with heaps of fodder or fagots on the flat roofs. Everywhere there are dirt, smell, heat, and noise.

Here comes a porter bearing a load of wood. His thin legs and bare arms and breast gleam in the sun as if they were carved out of mahogany. Yonder is a Brahman, with high

forehead, well-shaped nose, and finely formed mouth. Notice his dignity of carriage. He is greeted with respect by all, for he is of the highest "caste" in the land. There is an Indian woman, tall and slender, barefooted, carrying a water-pot on her head, and walking with a grace that any lady might envy. Look at the little girls. They are small copies of their mothers; they wear just the same kind of robe, and have just the same kind of rings in their noses, brass or silver bracelets on their arms, and bangles on their ankles.

There is a cry of "*Ey-ah!*" and the people who are walking in the middle of the road jump out of the way as a splendid carriage, drawn by two high-stepping bays, drives slowly along. In it is a native rajah, attired in white silk trousers, a pink jacket, and a magnificent green and gold turban with a high plume and a brooch of diamonds. He is on his way to visit the governor. Yonder, leaning on his staff, is a fakir or devotee, clothed in tatters, his long tangled hair hanging over his eyes. He has no possessions, and nowhere to lay his head; he lives on the alms of the faithful.

Here is a Parsee lady in a robe of sky-blue silk, with a veil of muslin and silver, and accompanying her is a Parsee gentleman in a brimless top hat. In yonder gharry is an English lady in a white dress and a large sun-helmet. A few Englishmen in flannels and similar helmets are to be seen; and yonder is a water-carrier, with a goat-skin bag of water on his back. Add to these, Arabs, Armenians, veiled Mohammedan ladies, wild-looking hillmen, native blue-clad policemen, and clerks, wearing their shirts outside, and you have some idea of the motley crowd which surges to and fro in the streets of Bombay.

Every newcomer is lost in amazement at the abundance of animal life within the city. Overhead, amidst the feathered crowns of the date-palm and the sacred fig, squirrels and parrots may be seen, while the air is clamorous with gray-necked crows. Kites and vultures hover above; the mina birds keep up an incessant chattering; the pigeons, hoopoes and sparrows seem numberless. Monkeys live in the trees and on the house-tops; and down in the streets the pariah dogs, the

scavengers of the city, slink to and fro. And to make confusion worse confounded, camels stalk along amidst the crowd, Brahman bulls go where they will, strings of laden donkeys push past, while bullocks or oxen, drawing great creaking carts, lumber slowly along.

The natives seem to live their life in the public gaze, doing a thousand things in the roadway, the gutter, and the little open shop that we do within closed doors. The merchant writes his accounts with a reed upon long rolls of paper, under the eyes of all the world; the barber, whetting his razor on his bare leg, shaves his customer in the open street; men wash and clean their teeth in front of their houses. There seems to be no privacy in Indian life.

Here you may see vast wealth and abject poverty side by side. There are in Bombay palaces fit for a prince, and abodes unfit for a dog. There are rich men in plenty; but the bulk of the people are poor, and never far removed from starvation. Plague and famine take a terrible toll of them every year, even though the British Government uses all the resources of civilization to avoid these scourges.

III

This land of India, which we are now visiting, has been well called "the brightest jewel in the British crown." India is a great military dependency, won by force of arms and held by force of arms. When the British first set foot on its shores they found a dense population, settled governments, and great cities with long histories behind them. They found a climate unsuitable for the permanent home of Europeans. After a century and a half of occupation, the only British in India are temporary sojourners—soldiers, officials, and merchants. India remains and will remain the land of its own people. When we compare the area and population of the governing British Isles and of the subject land of India, we are struck with amazement. India might be carved into seventeen

Great Britains. Within the vast bounds of the Indian Empire we find nearly one fifth of all the inhabitants of the earth; for every single individual in Great Britain, India has more than seven.

A bird's-eye view of India shows us three great tracts of country, varying greatly in character. In the north we see the vast mountain region of the Himalayas, a huge tumbled ridge composed of several parallel ranges, separated by enormous valleys and extensive table-lands.

On the south the Himalayas descend steeply in a series of great terraces towards a vast plain extending across the breadth of India. Great rivers water this plain, and bring down much fertile silt every year. On the south the plain gradually rises to a belt of hilly country, consisting of the Vindhya and Satpura ranges; and beyond them extends the triangular plateau of the Deccan, which comprises the peninsular part of India. The whole of this great table-land, which is crossed by mountain chains and cleft by river-valleys, with here and there a broad level upland, slopes to the Bay of Bengal, and is bordered on the east and west by two coast ranges of mountains known as the Ghats. The Eastern and the Western Ghats meet at the southern apex of India in the Nilgiri or Blue Hills.

India is a land of mighty rivers. The most important river on the west is the Indus, which rises 18,000 feet above sea-level on the northern slopes of a Himalayan range. Its greatest feeders are the united streams of the Jhelum, Chenab, Ravi, and Sutlej, which all take their rise in the Western Himalayas, and flow through a rich tract of country. These four great tributaries, with the Indus itself, give their name to the Punjab, or "land of the five rivers." After the Indus is joined by these streams, it flows on to the sea without receiving another tributary. From the port of Karachi, which stands at the western extremity of its delta, the produce of north-western India is shipped to all parts of the world.

Another great river, the Brahmaputra, rises at no great distance from the source of the Indus. The Brahmaputra, at

first known as the Sanpo, is only in part an Indian river; for the first thousand miles of its course it flows on the northern side of the Himalayas. Then turning abruptly southwards, it bursts through a gorge in the mountains, rolls onward through the plain of Assam in a broad, turbid stream, and joins the Ganges. In the lower part of its course it is much subject to floods.

Now we come to the Ganges, one of the mightiest and most useful rivers in the world. No other river of India so richly deserves the gratitude and homage of the Hindus, for more than one hundred millions of people draw life and prosperity from its never-failing waters. Every year the Ganges and its tributaries bring down enough silt to give fertility to the land for nearly a thousand square miles. Vast canals have been made from the main river, and the fertilizing waters have been led over miles of country formerly parched and sandy, but now bearing good crops.

From an ice-cave on the southern slope of the Himalayas the Ganges leaps forth, and dashes furiously through deep gorges and narrow ravines to the plain below. As soon as it leaves the mountains, it is tapped by irrigation works. Four thousand miles of main and branch canals spread its waters over a wide area, and lead them back again to the natural bed at a lower level. At Allahabad the Jumna, which has pursued a parallel course from the mountains, joins the Ganges, and the river becomes a magnificent waterway. The combined stream discharges itself into the Bay of Bengal by the largest delta in the world.

So extensive is India, and so varied in altitude, that almost every kind of climate is found within its bounds. While the plains are unbearably hot and stifling, it is always possible to take refuge on the mountain slopes in what the British call the "hill stations," and there enjoy comparatively cool breezes. Generally speaking, the Indian year may be divided into three seasons—the hot, the rainy, and the cool. The hot season, which lasts from March to the end of April, is rainless, and the sun's heat is terrific. The rainy season begins early in

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THE TAJ MAHAL, AGRA

May, when the south-west monsoon, heavily laden with moisture, comes rushing in from the Indian Ocean, accompanied by thunder and lightning. On this monsoon the fortunes and even the lives of millions depend. The rainy season lasts from June to October inclusive, and during that time the seaward slope of the Western Ghats, the hills of Assam, and even the plains of the Ganges are deluged with rain. The cool season lasts from November to February inclusive, but on the plains it is cool only in comparison with the hot season. The coldest day a Calcutta native has ever known would be to us a pleasant summer day. At Bombay the European residents declare that they are baked for one half of the year, and boiled for the other half.

India is remarkable for its vegetation. There are wide stretches of forest-land, especially in the mountain regions. In the cool hill regions vast quantities of wheat, barley, and European vegetables are grown. Coffee has been introduced, and tea is as much at home amongst the Western Ghats, the Nilgiri Hills, and the valleys of Assam as it is in China.



INDIAN PLOUGH.

India is almost wholly an agricultural country. The chief crops are millet, rice, maize, wheat, cotton, oil-seeds, indigo, and sugar. Rice, millet, and maize form the staple food of the people, and millions of acres are devoted to the growth of these crops. Agricultural implements such as are used in this country are quite unknown to the Indian farmer. The wheat is reaped by hand, and the threshing is done by bullocks and buffaloes, which tread out the grain, as they used to do in Bible times.

Cotton is grown in immense quantities in the rich black soil of the Deccan. Along the banks of the rivers the seeds of the flax plant are cultivated to furnish linseed oil, and jute is largely grown : : its fibres which are made into rope,

sacking, and other coarse cloth. Indigo, which produces the well-known blue dye, and the poppy, from which opium is manufactured, are largely cultivated in the plain of the Lower Ganges.

The people of India are of many distinct races and speak many diverse languages. Three fourths of the whole are Hindus, who all wear the "livery of the burnished sun," but differ much in build and character. When the fair-skinned Aryans from western Asia settled on the Gangetic plain, they found dark native races in possession. The newcomers were much superior in every way to the people they had conquered, and they were anxious to remain so. They therefore forbade marriages between the fair and the dark race, and divided themselves into four classes or castes—the Brahman, or priestly caste, the warrior caste, the trader and farming caste, and the servant caste. The castes were kept apart by strict laws, and they might not even eat with one another without being degraded or defiled.

Even at the present day caste is very important, and many serious difficulties are caused by it in India. The Brahman, who represents the highest caste, prefers death to defilement, and, even though half-starved, will throw away his meal untasted rather than eat food on which so much as the shadow of a European or a low-caste native has fallen. To taste beef in any form is considered one of the greatest crimes, for bulls and cows are sacred animals, and must not be killed.

The Hindus are fond of their children and relatives, and care for their poor, sick, and aged. None can excel them in patient endurance under trial and suffering, but they hold it no dishonour to fawn and eringe, to lie and cheat; this is due in large measure to the many centuries of slavery which the race has suffered. Under British protection they have greatly improved. Their religion is Brahmanism, but this is not the only religion in India. Our King, as Emperor of India, has more Mohammedans under his sway than any other sovereign. A very interesting people known as the Parsees live in and near Bombay; they are descended from the ancient Persian fire-worshippers.

IV

India has at least seventy-five cities which number over fifty thousand inhabitants. Let us now make a tour of a few of the more important of these cities.

Starting from Bombay, our train climbs the Ghats by a zigzag and difficult route, through dark forests, until we reach the wide plains and rocky flats of the Deccan. On our way we pass many villages, each with its cluster of thatched huts, its hedge of prickly cactus, its little rude temple, and its fields of millet, cotton, tobacco, saffron, and rice.

In due course we descend into the valley of the Narbada, climb the wooded slopes of the Vindhya Mountains, and find ourselves in a cluster of native states known as Central India. These native states are not ruled directly by British officials, but by native princes, under the advice and guidance of British "residents." The native princes are very loyal to their Emperor. We may turn aside through a country richly covered with forest to visit Udaipur, the capital of one of these states—a place of forts, pagodas and temples, palaces and tombs; then continuing our journey, we reach Jaipur, the wealthiest of the Rajputana native states. Its capital is a most attractive and well-governed city.

Once more we board the train, and shortly cross the Jumna and run into Agra, the ancient capital of the Mogul Empire in India. The fort contains the palace of Akbar, the famous Mogul Emperor, whose reign marked the "Golden Age" of native rule in India. It also contains the Pearl Mosque, one of the finest buildings in India. Agra's crowning glory, however, is the Taj Mahal, or Peerless Tomb, built by the Emperor Shah Jehan to the memory of a beloved wife. In the midst of a garden of cypress trees, festooned with lilac-tinted creepers, rises the lovely structure, with its graceful minarets and glorious dome, white as an alpine peak. It is the loveliest work of art in all India, and it enshrines an emperor's love and sorrow. It is a tomb among palaces, and a palace among tombs.

From Agra, which is now a railway centre of importance

and a place of considerable trade, we move on to Delhi, one of the oldest cities in the world, and now the capital of our Indian Empire. Here we see the great Jama Masjid, the largest mosque in India, which is built of red sandstone and white marble, with gilded pinnacles and cupolas.

Delhi will always be associated with stirring memories of the Indian Mutiny. This mutiny broke out on May 10, 1857, at Meerut, a military station some forty miles to the north-east. The mutineers murdered the Europeans in the place, and then galloped to Delhi, which rose in arms to welcome them. The small British garrison was forced to withdraw, and speedily the mutiny became a rebellion, which spread rapidly through the North-west Provinces, Bengal, and Central India. The Sikhs of the Punjab, however, were loyal, and so were the native troops of Bombay and Madras. The main interest of the war centred round Cawnpore, Lucknow, and Delhi.

Cawnpore lies on the right bank of the Ganges, about 250 miles south-east of Delhi. Here the mutineers massacred more than two hundred British women and children, and threw their mangled bodies into a well, over which a beautiful monument now stands. At Lucknow, fifty miles to the north-east, the Europeans held out, in spite of overwhelming odds, until they were gallantly relieved by General Havelock. The battered and shot-torn walls of the Residency still remain to remind us of its heroic defence against the assaults of the rebels.

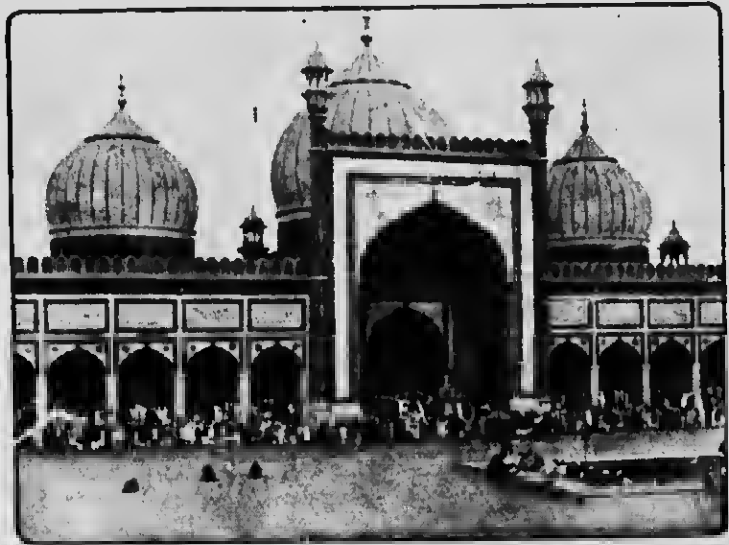
A siege of a very different character took place at Delhi. The city was garrisoned by 30,000 rebels, and was besieged by a small British force, which held a ridge to the north of the city, despite all the attacks of the natives. In September the city was stormed. The Kashmir Gate was blown up by a devoted band of soldiers, nearly all of whom perished;



MONUMENT OVER THE
WELL, CAWNPORE.

and after six days' fighting in the streets, Delhi was won. With the fall of the city the worst of the danger was past, and eighteen months later the country was once more peaceful. Delhi has now large wheat and produce markets, and outside the walls one sees wreaths of black smoke rising from the tall chimneys of cotton-mills.

Our train now moves on towards the north-west, until we reach Lahore, the capital of the Punjab. It is a busy place, famous for its huge city walls and its mosques with domes of



THE JAMA MASJID, DELHI.

richly-coloured porcelain. From Lahore, which is now an important railway centre, we hurry northwards, crossing the Chenah and the Jhelum by great viaducts, and presently arrive at Attock, where the swiftly-flowing Indus foams between rocky banks.

Our next stopping-place is the frontier town of Peshawar. A short ride brings us to the mouth of the Khaibar Pass, a great gloomy defile which winds in a north-westerly direction for thirty-three miles between lofty mountains rising like walls from the narrow valley. This is the gateway of India on

the north-west, and every invader except the Briton has had to fight his way through its narrow portals. It is now safely guarded for us by native troops.

Returning now to Delhi, we take train south-eastwards to Allahabad, which stands at the confluence of the Jumna and the Ganges. Several great railways converge at Allahabad, which has become the most important junction in India.

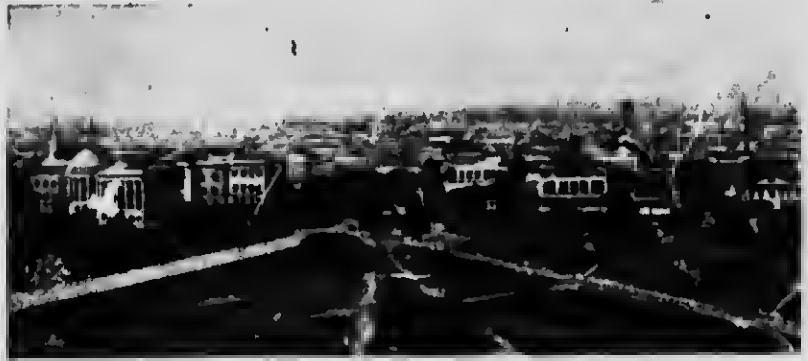


TEMPLES ON THE RIVER BANK, BENARES.

We are now speeding along the great plains of the Ganges. Everywhere we find the country as flat as it possibly can be, and all that varies the monotony is an occasional clump of palms sheltering a village. The land seems quite bare, but here and there are slow, ungainly buffaloes and humped cows browsing on the almost invisible herbage. As we proceed we see strings of peasants passing from village to village, donkeys laden with produce, and now and then a solid-wheeled cart creaking over the land.

Journeying on, we reach the sacred city of Benares, which is the very gate of Paradise to the Hindu. A visit to its sacred shrines is an action so full of merit that it covers a multitude of sins.

Leaving Benares, we take train for Calcutta, the chief city of Bengal, and the capital of our Indian Empire up to the year 1911. It stands on the left bank of the Hoogly, one of the principal streams of the Ganges delta. It has by no means an ideal situation. The European part of the city, however, is very imposing. It forms an immense crescent of white buildings, with flat roofs and broad balconies, fronting



CALCUTTA.

a noble park which stretches down to the banks of the river. Calcutta has a population of nearly a million and a half.

The only other Indian city which we shall visit is Madras. It lies some seven hundred miles to the south, and if we are tired of Indian railways we may journey thither by steamer. Madras stretches for nine miles along the surf-beaten and sun-scorched shore of the Bay of Bengal. Until a few years ago vessels had to lie in the roadstead, which is sometimes swept by terrible hurricanes. Now, however, an artificial harbour has been constructed. Two great converging piers, each about threequarters of a mile long, have been built, and inside them is a safe harbour nearly a square mile in area. The business centre of the city is known as "Black

Town," and is an ill-built, densely-populated area about a mile square. In the other parts of the city, however, there are handsome public buildings.

From Calcutta or Madras we can make our way across the Bay of Bengal to Burma, the largest and most easterly province of British India. It occupies a mountainous region on the east of the bay. For a thousand miles along the coast extend low-lying plains backed by densely-wooded mountains, from which countless rivers flow to the sea. The coast is subject to an extremely heavy rainfall, and forms rice-lands of great fertility. Roads are few and far between, and the rivers are the main highways of trade. Beyond the mountain ridge lies the broad basin of the Irawadi, and between the Irawadi and the Salwin the country consists of a series of high plateaus, crossed from north to south by mountain ranges which are offshoots of the great Himalayan range. Through almost every valley a rushing river finds its way, sometimes shut in by tall cliffs, at other times winding through peaceful paddy-fields. All these streams are subject to great floods in the rainy season.

The Irawadi is the great inland artery of Burma. At Bhamo, near the Chinese frontier, the river is 500 yards wide, and thence it is navigated by steamers to the sea, which is more than 700 miles away. Flowing southwards, the river reaches Mandalay, which was the capital of the Burmese king until 1886, when he lost his throne. The city lies within triple stone walls and a teakwood stockade. Its unpaved streets are broad and straight, and are very picturesque; the natives, especially the women, wear costumes of the brightest colour.

Approaching the sea, the Irawadi splits up into many branches, and forms a broad alluvial delta. Near one mouth of the river, which brings down as great a volume of water as the Ganges itself, stands Rangoon, the British capital of Burma, from which immense quantities of rice, teak, gums, and spices are shipped.

Burma is inhabited by several races of people, all of whom

differ in appearance, habits, and customs from the Hindus, but resemble in some degree the Chinese and the Japanese. A tall Burman is seldom seen; but the people are strongly built, and have light brown or yellowish skins and black hair. They are a cheery, light-hearted people, fond of plays and music. Everywhere in Burma one sees temples and monasteries, and strings of yellow-robed, shaven-headed monks. These monks are not priests, but men who have retired from the world and think only of saving their own souls. They do not ask for alms, but take what is given them without a word of thanks. Every Burmese boy is obliged to go to one or other of the monasteries for a time. He waits upon the elders of the monastery, and in return is taught reading, writing, arithmetic, and the Buddhist scriptures.

There are no schools for girls except those supported by the missionaries and the government; but when they grow up they are on an equal footing with the men. The Burmese women are perhaps freer and happier than any others in the world; every traveller notices their gaiety and lightheartedness. They are born traders, and usually carry on business for themselves.

China

I

THE next great empire of Asia which we are to visit is China. If we were starting from our home in Canada, we should probably go by rail to Vancouver, and then sail westwards across the Pacific to Shanghai or some other Chinese port. But we are already in Burma, and our best way will be to take steamer round the great peninsula which is usually known as Farther India, or Indo-China. This route will enable us to visit some interesting places by the way, and we shall see the Union Jack flying over many quaint and foreign-looking scenes.

After leaving Rangoon we steer south along the narrow province of Tenasserim, which is renowned for its vast teak forests. Off the shores are many islands, which are so crowded together in some places as to form archipelagoes.

We enter the Malacca Straits, with the Malay Peninsula on our port side and the large island of Sumatra on the starboard. We are still skirting country under British protection, and soon we arrive at the small island of Penang, the first of a series of British colonies known as the Straits Settlements. We enter its harbour at Georgetown, where we notice a number of lighters filled with ingots of tin from the mines of the island. Opposite the island is Province Wellesley, a strip of mainland densely wooded and well watered. In the night we pass the Dindings, and next day we see Malacca, after which we have the shores of the peninsula and of Sumatra in sight on either hand until nightfall. Early the next morning a number of islands come into view, and, threading their narrow passages with great care, we presently see before us the British island of Singapore. Here we find a bright and sunny city embowered in the richest tropical verdure, and one of the most important sea-ports in the world. It is an absolutely free port, without a custom-house, and carries on an enormous trade; steamships of more than fifty regular lines call at Singapore.

From Singapore we continue our voyage along the east side of the Malay Peninsula, and heading towards the north-east we cut across the Gulf of Siam. When next we come within sight of land we are coasting along the French territory of Cochin China, and we call at Saigon, the capital of French Indo-China. We find it a modern and handsome city, laid out on the chess-board pattern, with boulevards, wide streets, and fine squares. It stands on the Saigon River, which is connected with the Mekong by canal and railway.

Passing northwards along the kingdom of Annam, we steer for the Gulf of Tongking, and reach the delta of the Red River, which is almost entirely planted with rice. More than a hundred miles up-stream stands Hanoi, the capital of the province of Tongking. Sixty miles of alluvial land lie between

it and the sea, and all this land has been brought down by the river since the seventh century.

We now steer east, and pass through the Hainan Strait, between a peninsula of the mainland and the large island of Hainan, and make all speed for Hong-Kong.

Here once more we see the Union Jack. It flies from the crowning peak of the little island of Hong-Kong, which stands at the mouth of the Canton River, about a mile from the mainland. Hong-Kong is little better than a huge bare granite rock, with a sprinkling of soil. Nevertheless, it is a



VICTORIA, HONG-KONG.

most valuable possession, for it stands at the very gate of China, and is the greatest trading centre of the Far East. Its beautiful harbour looks like an inland lake surrounded by jagged mountain ranges, and on its sparkling waters a thousand vessels, boats, and junks ride in perfect safety. The peninsula of Kowloon, on the mainland opposite, forms part of the crown colony of Hong-Kong.

Victoria, the only city of the island, is a very busy place, with a great trade in tea, silk, opium, and cotton goods. It has many fine public buildings, but it is not a healthy place of residence, being walled in by a mass of rock which shuts out the cool evening breezes. There is very little level

ground to be seen, and steep streets of stairs lead from the sea-front right up the face of the hill. A cable railway runs from the shore to the heights. Most of the people of Hong-Kong are Chinese, who are prosperous and fairly contented under their British rulers.

But we are eager to set foot on the soil of China itself, and we go aboard a little steamer, and are soon speeding across the blue waters, bound for Canto, the great southern capital of the Chinese Empire.

After a pleasant day's sail, during which we pass the Portuguese settlement of Macao, we approach the city. We see



THE RIVER AT CANTON.

nothing of it, for its low, level streets are hidden by forests of masts. The navigable channel is alive with shipping and crammed with junks and brightly-painted boats rowed by women, while here and there are rafts on which poultry are reared. The whole river has the appearance of a floating town, and it is said that more than three hundred thousand people, or one eighth of the total population, live in boats. We notice that most of the ocean-going steamers in the port fly the British flag.

We go on shore, and find ourselves in a vast city, with miles and miles of streets so narrow that only a strip of sky is seen; and even that, in places, is shut out by screens of matting and

boarding stretched from roof to roof. The streets are badly paved and are crowded with sedan-chairs. Hanging from the fronts of the shops we see signboards of every description. They are hung lengthwise, because the Chinese write, not from left to right as we do, but from top to bottom. Busy hawkers pass along, with poles over their shoulders, from which are suspended in boxes, trays, or tubs the wares they have for sale. Everywhere we see beggars, and as they catch sight of us they *kow-tow*, or kneel before us, touching the ground with their foreheads, and then show their deformities to excite our pity.

II

There are few more interesting countries than China. Not only is it greater in extent than the whole of Canada, but it boasts one fourth of the world's total population. Its history goes back to thousands of years before the Christian era, and it had an advanced civilization long before the foundation of Greece. The Israelites of old had heard of the Chinese, for the prophet Isaiah speaks of the land of Sinim—that is, of China. The Romans traded with them by overland routes; but it was not until the beginning of the sixteenth century that there was any intercourse by sea between China and Europe. For ages the Chinese were very jealous of foreigners and shut them out of their land.

China Proper comprises one third of the empire, and has the whole of its coast-line. Between China Proper and Mongolia on the north is the Great Wall, which is one of the wonders of the world. This vast wall of stone and earth, faced with brick, is more than fifteen hundred miles long, from twenty-five to thirty feet high, wide enough for four horses to be driven on it abreast, and crowned with towers of two or three storeys at short intervals. We shall get a better idea of the vastness of this structure if we realize that it is long enough to serve as the International boundary of Canada from Lake Superior to the Pacific. It was intended

China

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to form a barrier against the wild tribes of north-eastern Asia.

China Proper is divided into three great river basins by two mountain ranges

which run eastward from west. North of the northern range

lies the Great Plain, the basin of the Yellow River. It is

the richest and most thickly populated

lowland in the world, and is believed to

be inhabited by no

less than one hundred and seventy-seven millions of people.

Much of northern China is covered with a crumbling yellow earth called *loess*, which is believed to be dust blown over

the land during many centuries from the interior table-lands of Asia. Enormous crops of rice, maize, millet, and cotton

are grown here with but little attention or labour. For thousands of years these loess-covered valleys and plains have

been the granary of China. Land, rivers, and sea alike are stained yellow with this soil. Everything is yellow—the

fields are yellow, the houses are yellow, and the roads are yellow. Hwang-ho means the "Yellow River," and Hwang-

hai, the "Yellow Sea." The Emperor is known as Hwang-ti—that is, the "Yellow Emperor." Yellow is the imperial

colour of China.

Between the two great mountain ranges is the valley of the River Yang-tse, a region of rich red soil, which is also very

fertile, and grows tea, cotton, grain, mulberry, sugar-cane, and rice in the richest profusion. The mountains of the west

and south are said to be rich in minerals; but as yet they are unexplored, because the Chinese believe that they are haunted

by monsters and fairies. South of the southern mountain range lies the third division



THE GREAT WALL OF CHINA.

of China Proper—the rugged plateau of Yun-nan and the alluvial plains watered by the Si-kiang. The climate is hot all the year round, and the rainfall is heavy. Here, as we might expect, much rice is grown.

The Chinese are very proud of their great rivers, which form the chief highways of travel and trade throughout the country. The most important river is the Yang-tse, or “Son of the Ocean,” which exceeds three thousand miles in length. It rises in Tibet, and is little known until it appears in the south-west province of Yun-nan, where it is called the “River of Golden Sand,” because much gold dust is found in its bed.

Fourteen hundred miles from its mouth it passes through a series of immense gorges, and below these it becomes navigable for steamers, and zigzags on through rich and fertile country which supports a dense population. In parts of its valleys there are actually eight hundred people to the square mile.

The Hwang-ho is much inferior to the Yang-tse in size and importance. It crosses the Great Plain, and has brought down so much silt that now it flows high above the surrounding country, which is as level as the surface of a lake. Though the river is embanked for hundreds of miles, it frequently overflows, and causes so great destruction of life and property that it is called “China’s Sorrow.”

The third great river is the Si-kiang, or West River, which we have already seen at Canton.

China is almost as much cut up by rivers and canals as Holland. The river-front of every town shows a forest of masts, and an almost bewildering variety of boats, from great barges and junks, with big sails ribbed with bamboo, down to little slipper-shaped canoes which hold only one man. Some of the boats are propelled by paddle-wheels worked by coolies; and all of them have eyes painted on the bows, for the Chinese say that without eyes a boat cannot see its way. Millions of Chinamen are born, live, and die upon the water. Their boats are their houses, and they never set foot on shore if they can help it. On the decks of these family boats children

are seen playing, with little barrels fastened to their backs to act as lifebuoys if they should happen to fall into the water. Fishermen are seen everywhere on these rivers. Some of them do not use rod or net, but have tame cormorants to fish for them. The cormorant watches the water, and from time to time dives and catches a fish, which it would at once swallow were it not prevented from so doing by an iron ring fastened round its throat. The bird is very alert and active, because it knows that when its labours are over the ring will be removed, and it will be rewarded with a share of the catch.

China has almost every variety of temperature, from tropical heat and monsoon rains to severe cold and drought. We therefore find a great variety in her vegetable products. Three zones of cultivation may be distinguished, corresponding generally with the three basins already mentioned. North of the Yellow River the climate is too severe for the growth of tea or rice, and here the land is sown with millet and barley. The central zone has much milder winters, and in it rice and wheat, tea, sugar-cane, and the bamboo grow extremely well. The eastern part of this zone is celebrated for the production of silk and cotton, and the middle produces enough rice to feed the whole country. The southern zone, though hotter, has similar products, but is not so fertile as the central zone.

Next in importance to rice cultivation is the rearing of silkworms. There is no part of China where silk is not produced. In the central and southern zones mulberry orchards are seen everywhere. In the colder northern zone the worms are fed on a kind of oak, and not on the mulberry leaf. For hundreds of years the Chinese jealously preserved the secret of the silk industry, and it is said that the first silkworms' eggs ever brought to Europe were smuggled out of the country in a bamboo cane. Next to silk, tea is the product which we most associate with China. The best China tea is never exported by sea, but is carried by car and caravans to the Siberian railway, by which it is sent to Russia.

In China the cultivator of the soil is held in high esteem, for he produces the food of the people, and without him life

would be impossible. Chinese society is divided into four great classes: first, the scholar; then the farmer; third, the artisan; and, last of all, the merchant. In order to mark the great dignity and national importance of agriculture, the emperor every year ploughs a furrow in the presence of his ministers.

III

We have already visited the great southern capital and sea-port of China. We will now visit Peking, the northern capital. When we have seen its main features, we shall have formed a good idea of a Chinese city. There are more than four thousand walled cities in China, but they differ very little from one another except in size.

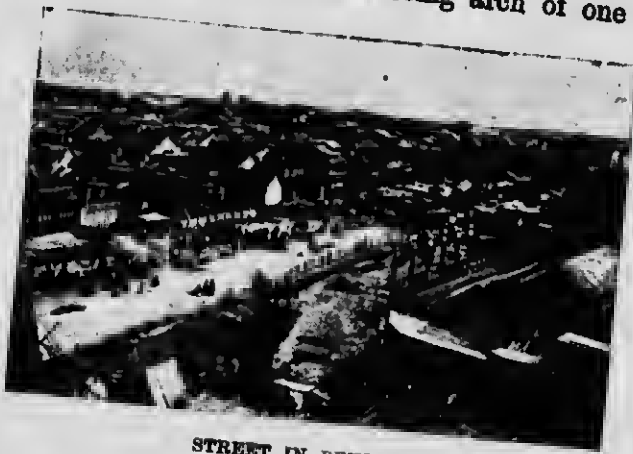
If we approach the capital from the sea, we shall have to sail up the Pei-ho River from the Gulf of Pe-chi-li. The river flows through a flat, swampy plain, dotted with salt-mills worked by huge mat sails, and then through rich, fertile fields of rice and cotton. After a sail of eighty miles we reach Tientsin, the port of Peking. We might, if we so wished, now take the train to Peking. As, however, we prefer to see something of the country, we decide to travel by boat and by road.

The traffic on the Pei-ho is enormous. Boats and barges of every description crowd its muddy waters. During the greater part of the four days' sail from the Gulf of Pe-chi-li to Tungchow, we scarcely lose sight of fertile fields of corn, barley, and millet. Tungchow is forty miles from the capital, and we ride this distance behind a couple of trotting mules, in a hooded cart with heavy wheels and no springs. The driver perches on the shafts, while we, seated on the floor of the cart, are jolted and shaken about in the most merciless fashion. Yet we are travelling over one of the best roads in the empire. What the worst must be like we cannot imagine.

Occasionally we meet yellow-faced merchants, wearing black satin caps and silk gowns, riding on ponies or carried

in sedan-chairs; more frequently we see men trundling along passengers and goods on wheelbarrows. Sometimes the owner of a wheelbarrow rigs up a sail to help him along, or attaches a donkey to the front of the barrow, while he holds up the shafts and pushes behind. Now the throng of mule-litters, sedan-chairs, wheelbarrows, donkeys, and carts increases, and we see before us the huge walls of Peking stretching away in a long line, with here and there a many-storeyed tower, which, like a sentinel, marks the site of each of the sixteen great gates.

Our cart clatters under the echoing arch of one of those



STREET IN PEKING.

vast gateways, and we are in Peking. Within the wall there are really three cities—the Tartar or Manchu city to the north, the Chinese city to the south, and, inclosed by the two former, the Forbidden city, in which the emperor lives. Viewed from the wall in summer, the Tartar city appears to be a mass of foliage, with roofs peeping up here and there, and broad, dark, unpaved tracks running through it.

In the centre is the Forbidden city, surrounded by double walls of faded vermilion, and appearing to consist of a line of glittering, yellow-tiled pavilions. These palace roofs stand high above the low buildings which form the bulk of the sheps and houses. The Tartar city contains large numbers



PALACE OF THE LAMA, LHASA, TIBET.

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of tents, and here we see caravans of brown, woolly camels being loaded with tea for the long journey to Mongolia. The Chinese city contains most of the shops, eating-houses, and theatres. At sundown the sixteen gates of Peking, and also the gates between the Chinese and the Tartar city, are closed, and can be opened only to officials on high imperial business.

Now let us enter the Chinese city. How narrow, dirty, and crowded the streets are! They are full of ruts, and in wet weather the carts plough through them up to the axles. There are no pavements, no public squares, gardens, or



STREET SCENE IN PEKING.

parks. The only open spaces are to be found in front of the temples. The houses are packed very closely together, and are never more than one storey in height. The fronts of the shops are carved in wonderful patterns and are brightly decorated, sometimes with gold-leaf. Signboards painted in red, black, green, or gold characters hang out everywhere, and every shop, however small, has a high-sounding title. Yonder sign, for example, is that of a coal-merchant, and the name of his shop is "Heavenly Ornament;" an undertaker calls his place of business "United and Prosperous;" while a fur-dealer has styled his "Virtuous and Abundant."

Many of the streets are so narrow that no carriages can pass

through them. If we wish to ride we must take a sedan-chair ; and even then progress will be difficult. The street rings with the shouts of the coolies, "Look out for your backs ! Look out for your backs !" We have to push our way through a motley crowd. Here, for example, comes the handsomely-decorated chair of a mandarin. Before him run two attendants armed with whips to clear the way, and behind them are boys carrying large painted boards on which is written, "Stand aside !" or "Respectful silence, please !" Here are scholars, soberly clad, and wearing spectacles with large round glasses. Here, too, are shaven-headed priests in yellow gowns, dandies in silk and satin, and beggars in rags.

Narrow as the side streets of Peking are, they are made still narrower by the stalls and booths of tradesmen. Here we see a quack doctor expounding the wonderful virtues of his medicines to a gaping crowd ; there fortune-tellers, seal-cutters, and letter-writers attract the attention of the passer-by. Near at hand is a money-changer sitting at a table on which there is a pile of the copper and brass coins known as *cash*. Two thousand of these cash are about equal in value to a dollar. When much money changes hands, silver is used, and this is weighed out in Chinese ounces, each ounce being called a *tael*. Fortune-tellers are found everywhere, for no Chinaman will undertake a piece of business, or set out on a journey, unless the fortune-teller assures him that the day is a lucky one. As we move along we see silk-shops, book-shops, drug-shops, flower-shops, crockery-shops, bird-shops, and shops which deal only in gold and silver paper. The Chinese burn this paper at the graves of their departed friends, to provide them with money in the land of spirits.

IV

The Chinese are a well-built, rather short race—something between the lithe, supple Hindu and the muscular European. Their faces have a strong yellowish tinge ; their cheek-bones are high ; their hair is lank, black, and glossy ; and their

eyes are narrow and black, and obliquely set. They are a temperate, cheerful, hard-working people, wonderfully patient and slow to anger. When roused, however, they can be extremely cruel.

Fashions in China change very little, and the national dress to-day differs but slightly from that worn hundreds of years ago. Most of the people wear cotton garments; but the wealthy dress in silk and woollen cloth, and in winter wrap themselves in furs and skins. The time for the change from summer to winter costume is announced by the emperor. The men shave the head, leaving only a small patch of hair, which is allowed to grow very long, and is plaited into a queue or pig-tail. In ancient times the Chinese did not wear the pig-tail. When, however, the Manchus conquered China, two and a half centuries ago, they ordered the Chinese, on pain of death, to dress their hair after the Manchu fashion—that is, to wear the pig-tail. The queue was thus originally a sign of subjection, and many of the people are now ceasing to wear it.

Small feet are thought by the Chinese to be a sign of feminine beauty, and so they make a practice of bandaging the feet of their girls. The process is very painful, and it begins when a child is about five years old. The result is that a fashionable Chinese lady can wear shoes about four inches long. When she walks, she totters along on her poor cramped feet, and is obliged to lean on the arm of her maid for support. This custom is now less widely followed than in former years.

Rice is the principal article of food. The poor also eat fresh and salt fish or vegetables, while the rich have, in addition, fowls, eggs, and game. A soup made of birds' nests is considered a great delicacy. Instead of knives and forks, the Chinese use a pair of chopsticks, which are about eight inches long. They are held between the thumb and fingers of the right hand, and are used as a pair of pincers. With these chopsticks the Chinese readily and neatly convey the rice from their bowls to their mouths.

In China obedience and respect to parents is considered one of the first and highest duties. No crimes are punished so

severely as those against parents, and a man who kills his father or his mother is put to death by slow torture of the most terrible kind. The best esteemed present that a dutiful son can make to his parent is a coffin. This is brought home with great pride, and is kept in the house, where it can be examined and admired by all visitors.

The sons of a family are very well treated, but daughters are little thought of, and poor people sometimes drown their girl babies. A great deal of money is spent on funerals, and the ceremonies are continued for forty-nine days. The mourners are dressed in white, with white shoes; but when the days of mourning are half over they wear light blue dresses.

V

We need not spend much time in the provinces of China beyond the Great Wall, for vast as they are, they consist for the most part of barren steppe, dreary desert, and sterile table-land. This description, however, does not apply to Manchuria, which lies to the north-east of China Proper. The northern part of that province is crossed by the Sungari and other tributaries of the Amur, and in their valleys there is rich alluvial soil. Though the southern part contains a great salt desert, it has a large extent of fertile soil, and beans, peas, wheat, barley, and fruits are now largely cultivated. In time Manchuria will become one of the granaries of the East. The forests of pine, walnut, oak, and elm are very valuable. Coal, iron, gold, and silver abound, but as yet there are few mines open.

Manchuria was originally the home of the Manchus, the conquerors of China, but by far the greater part of the population, especially in the south, are now Chinese. Mukden, the capital, stands about a hundred miles north of the Gulf of Liao-tong. It is an important place, and a great centre for missionary work. A brick wall surrounds it, and it has broad, straight streets, and a trade in furs, hardware, and European manufactured goods.

Between China Proper and Siberia lies the province of Mongolia, much of which is occupied by that vast "sea of sand" known as the Gobi or Shamo desert. The rest of the country consists of poor steppe land, quite treeless, but covered with short grass and fodder-sbrubs during the summer. In the north-west are some fertile and well-watered valleys, where farming is carried on; but, for the most part, the people are nomads, rich in flocks and herds, which they follow from one feeding-ground to another.

Very similar in general appearance is Eastern Turkestan, the people and the towns being found only in the oases of the desert and the more fertile valleys towards the west. We will therefore pass on to glance at the great bleak plateau of Tibet.



A MONASTERY IN TIBET.

So cold is Tibet that the people are obliged to wrap themselves up in many garments. In summer they wear long gowns of woollen cloth drawn in at the waist with a girdle, and in winter they wear sheepskins or furs with the hair inside. Both men and women are fond of bright colours and jewellery.

The Tibetans are Buddhists, and are the most religious people in the world. Their priests are called lamas, and there are a hundred thousand of them in the monasteries which are scattered over the country. The Grand Lama, or chief priest, lives at Lhasa, the capital, and is not only the chief ruler of the country but is worshipped as a god. The priests are jealous of foreigners and try to keep them out of the country. Nevertheless, several daring men have found their way into the capital, and have seen something of its mysteries, and

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some years ago a British force from India occupied the city for a time as the result of a long series of quarrels.

Within the houses the most striking characteristic is the dirt. Very few of them have any chimney or hole for smoke, which is expected to find its way out of door or window. Nevertheless, the ceilings are frequently covered with silk, and the walls hung with satin or brocade. Tea is drunk all day long, and a favourite dish is "buttered tea," made of tea-leaves stewed and mixed with rancid butter and barley-flour. Mutton and yak beef are eaten in great quantities.

The Tibetans are said to pray more than any other people. Most of them know only one prayer, and this they repeat myriads of times, and by doing so are supposed to "obtain merit." Not only is this prayer always in their mouths, but they have machines which they believe are able to pray for them. The commonest form of machine is the prayer-wheel, which has prayers written upon a strip of paper inside a small round box. The box is turned by hand, or by wind or water power, and every time it turns round the owner believes he gets credit for a prayer.

The Land of the Rising Sun

AFTER China we naturally turn to Japan, an empire very much smaller in size and in population, but of greater importance as an Asiatic power. The island-empire of Japan is sometimes called the Britain of the Far East. It extends for more than two thousand miles from the dreary coasts of Kamchatka to the tropical island of Formosa. In all, there are about four thousand islands and islets in this sea-girt empire, which the Japanese call the "Land of the Rising Sun." No other Asiatic nation is so intelligent and so skilful in adapting itself to the conditions of modern civilized life as Japan.

Though Japan has gone far in imitating the life of the West,

she still remains a very picturesque land. Many of her people wear the attractive native costume, and retain their simple and quaint customs. The country itself is exceedingly beautiful, and the people love beauty in all its forms. Even a coolie will stop to admire the exquisite droop of a branch over a wall, and a chimney-sweep will rejoice in the graceful shape of a vase. They love flowers, and when the delicate pink-white cherry-blossom is out, or the wisteria is in bloom, or the iris or chrysanthemum is in flower, they make holiday to enjoy the beauty of form and colour which the gardens then present. In arts and crafts, too, the Japanese are exceedingly skilful and painstaking. Their lacquer and enamel ware and carved work are the finest in the world. They seem to find their greatest delight in producing beautiful things. A Japanese workman was once asked, "Are you not sorry to finish the work that has been part of your life so long?" He shook his head, and said, "No; I expect the next will be more beautiful."

The main islands are four in number. They form a crescent, with the northern horn turned towards Siberia, and the southern horn towards Korea, and they almost inclose the Sea of Japan. These islands rise out of the immense depths of the Pacific Ocean, and chiefly consist of range after range of mountain heights, nearly all of which are volcanic. Some of the volcanoes are still active, and hardly a day passes without an earthquake. Formerly the people thought that these earthquakes were produced by a big fish bumping against their islands. Now their educated men know better, and carefully record the earthquake movements by means of delicate instruments.

The mountain ranges are well wooded, and their valleys are carefully cultivated. The most striking peak of all is the famous Fuji-san or Fusi-yama, the sacred mountain of Japan. Its form is very familiar to us, for native artists love to introduce its beautiful outline into their works of art. The traveller approaching Japan sees its dim, white, shapely cone long before he catches sight of the faint blue line of the coast. After he has landed at Yokohama or Tokyo,

he finds that the peak is almost always in sight. It rises grandly to a height of about 12,500 feet, and is said to surpass all other peaks in beauty and majesty.

The climate of Japan is, on the whole, colder than that of our Pacific coasts in the same latitude. Spring is mild and very wet. Summer is warm and damp, and typhoons or cyclones do great damage. Autumn, however, is delightful—clear, bright, and refreshing. In the north the ground is snow-bound for several months during winter, and even the



FUJI-SAN.

sea freezes on part of the coast. Elsewhere the snow does not lie long.

Rice is the most abundant food-grain. Wheat, barley, and millet grow extremely well, and there are large tea plantations. The produce of these plantations goes mainly to the United States, for the British dislike the pale colour of Japanese tea. Tobacco and cotton are grown, but silk is perhaps the most important product of all, and much of it woven into exquisite fabrics, is exported. Except for coal, which is plentiful, Japan is not rich in minerals.

The Japanese are usually short in stature, with small black

eyes less obliquely set than those of the Chinese, sallow faces, and lank black hair. Though not very muscular, they can bear a great deal of fatigue, and they are exceedingly brave.

The houses are small and slightly built, and the outer walls are made in sections that slide to and fro in grooves. These sections are usually pushed aside during the day, so that the passer-by can see all that goes on inside the houses. There are no chairs, sofas, or heavy pieces of furniture. The floor is covered with white straw mats, which are always beautifully clean, for the Japanese remove their sandals on entering a house. At night the sliding walls are closed up, and lanterns made of oiled paper are lighted. When bedtime comes, rugs are laid down on the floor, and blocks of wood, with a roll of soft paper on the top, are provided for pillows.

There are no fire-places. The house is heated with a charcoal fire in a little brass-lined box, and the cooking is done in little clay ovens. Whenever the weather becomes cold, the Japanese keep themselves warm by putting on more underclothing.

Let us now make a hurried tour of some of the chief cities of Japan. We will begin at Yokohama, the leading "open port" of Japan. It stands on the wide and deep bay of Tokyo, an inlet on the east coast of Honshiu or Hondo, and is a very busy place, though not at all striking in appearance. It is crowded with warehouses, banks, and shipping offices, and has a large railway station. On a bluff, looking seaward, are the pretty bungalows of the foreign residents. Round the margin of the bay sweeps the Tokyo railway, and away to the west is Fuji-san in all its majesty.

We board the train for Tokyo, and leaving Yokohama behind, run through a vast fertile plain of paddy-fields. Beyond the fields are well-wooded hills dotted with Shinto or Buddhist shrines. Presently we cross a river by a fine iron viaduct, and pass many pretty villages and peaceful farmhouses with thatched roofs. Now we draw near the capital of the Mikado or emperor, and the first view of it is very disappointing. The vast city lies in a low, wide plain, and consists of myriads of gray wooden houses, with nothing to relieve the

eye but here and there a clump of trees, the lofty tent-like roofs of the temples, and big factory chimneys belching forth smoke. Yet this city is one of the great capitals of the world. It covers seventy square miles, and contains a million and a half of people. In the centre is an ancient castle standing in picturesquely wooded grounds, and surrounded by a moat some six miles in circumference. This moat, with its green banks, spreading trees, and many water-fowl, is exceedingly pretty. To the south and east of the castle is the main street, which has a number of good buildings of brick and stone. The suburbs have many nursery gardens and well-trimmed



STREET IN TOKYO.

hedges. A circular railway now runs round the city, which is also supplied with street-cars.

Since 1869, when it became the seat of the government, Tokyo has changed considerably in appearance. Most of the mansions of the feudal lords have been pulled down to make room for new buildings better adapted to modern needs. The feudal retainers, armed with two-handed swords, have also disappeared; and the palanquin, or litter carried on the shoulders of two men, has given place to the jinriksha. At the same time the people have largely discarded their native dress, and now wear European clothes. This robs the streets of much of the picturesqueness which was formerly so attractive.

We will now leave the modern capital and take train for Kyoto, the ancient capital, in the midst of the tea-growing plains of southern Honshiu. The railway crosses and recrosses the national highway, spans rivers whose wide beds are filled only at flood-time, and tunnels through mountains. After passing through the fertile plain surrounding Fuji-san, we enter that part of the country which was devastated by a terrible earthquake in 1891, and reach the beautiful Lake Biwa. Another ten miles' ride brings us to Kyoto.

This ancient city is perched on thirty-six hills, on the slopes of which are no less than thirty-five temples. One of them contains a famous bronze bell. The Mikado's Palace and the Nijo Castle, with its massive wall, the Gold Tower, the Silver Tower, and a dozen other historic buildings, make Kyoto the most interesting city in the empire.



A JAPANESE TEMPLE, WITH WISTERIA IN BLOSSOM.

It is now only a shadow of what it once was, but it still remains famous for its bronze, enamel, porcelain, brocade, and embroidery, and its shops are the most attractive in all Japan. At night Kyoto appears at its best. All along the river are the platforms of tea-houses, and when myriads of brightly-coloured lamps flash their reflections in the stream, the scene is like fairyland. Twenty-six miles from Kyoto, on the river which drains Lake Biwa, is Osaka, the second city of the empire in size, and its eommercial capital. On the way thither we pass many straggling villages, each with its inn and Japanese

garden, which is sometimes scarcely more than ten feet square ; it is nevertheless a perfect park in miniature, with lake, summer-houses, waterfalls, bridges, temples, and trees, all complete, and all in exact proportion. The lake, for example, is about four feet long, and is full of small goldfish. On the border stands an old pine tree about eighteen inches high, and beneath its shade is a temple about the size of a brick. On a rugged crag, some two and a half feet in height, is a fine maple tree, about twelve inches high, and round the corner is an orange tree, bearing fruit, yet not above six inches taller. In the construction of these delightful little gardens the Japanese show wonderful taste and skill.

Osaka is sometimes called the " Venice of Japan," because of its numerous canals and many bridges ; but perhaps the " Manchester of Japan " would be a better title. Its forest of tall chimneys proclaims it the centre of the cotton-spinning industry ; and it has also large shipbuilding yards. Its river is always crowded with junks, boats, and barges. One of the most interesting sights in Osaka is the ancient castle, built of huge stones, some of which are as vast as those which formed the foundations of the Temple at Jerusalem. The castle is now used as a barracks, and everywhere one sees the trim, dapper little Japanese soldiers. The foreign import trade of Osaka is carried on at Kobe, a town of a hundred thousand inhabitants. The railway will carry us to this " treaty port " in an hour. Here we find great ocean " liners " as well as " freighters " from all parts of the world. Behind the town is a rugged chain of mountains, and the villas of the European residents dot the slopes of the foot-hills. The main street is full of native shops, in which we can buy all sorts of curiosities from a bronze god to a stone lantern.

From Kobe we take the weekly steamer for Nagasaki. We sail across the Inland Sea, which is noted for its beautiful coast scenery. " The entrance to the sea is a narrow passage apparently not more than two miles wide. When the vessel steams through this entrance, the whole scene baffles description ; there are islands, bays, terraced hills, stately woods.

and wooden villages nestling in every recess. The sea, resplendent as a mirror, is without a ripple; and fleets of fishing-junks are dotted about everywhere. It is simply a fairy scene which passes description."

Nagasaki stands on a long, narrow bay, one of the deepest and safest harbours in Japan. The heights around the town are well wooded, and the slopes are laid out in terraces. Here and there is seen a village, or a temple shaded by a camphor tree. Some of these evergreen trees have trunks fifteen feet in diameter, and are two or three hundred years old. For the production of camphor, they are cut into chips, which are boiled; the vapour is condensed into oil and camphor; the oil is pressed out, and the camphor is then ready for exportation.

The town of Nagasaki has no striking features, but its land-locked harbour, with quaint junks and fishing-vessels, is very picturesque. The importance of the place is due to its docks, and to the coal-fields which are worked in the neighbourhood. Its exports are tobacco, tea, and camphor, and one of its main industries is the manufacture of articles in lacquer, which has been a Japanese art for two thousand years.

Siberia

WE have now finished our survey of the monsoon lands, with their abundant rains and heat, their rich plant-growth, and their dense population. We must next turn to those parts of Asia where different conditions prevail, and where want of rain or want of heat makes the struggle for a living more severe, and the population more scanty. In the north of Asia we have seen that there is a vast region of plains, with a gradual slope from the central mountain region towards the Arctic Ocean. This land is called Siberia, and forms part of the great empire of Russia. The Russian Empire also includes a wide extent of steppes

east of the Caspian Sea, a great basin of inland drainage, with rivers flowing either into great salt lakes such as the Caspian Sea and the Sea of Aral, or else losing themselves in the thirsty plains which their water charms into fertile oases.

Siberia is greater in area than the whole of Europe, but its population is less than that of London. It is half as large again as Canada, and in some respects it resembles our own country. We have spoken of its barren tundra fringe towards the Arctic Ocean, its forest region, and its fertile plains whose wealth is yet only partially known. To complete the likeness, the awakening of Siberia into importance has been begun by the opening of a wonderful railway running from west to east across its whole extent. But here the likeness ends, for the first European settlers in Siberia were convicts sent there in chains, banished from their homes in Russia to a region whose vastness and emptiness made it a prison from which there was no escape.

Between the mountain ridge which forms the southern boundary of Siberia, and the Arctic Ocean, which forms its northern boundary, three long zones or belts extend from east to west—the steppe, the forest, and the tundra. The steppe region, which is watered by the upper courses of the great rivers Ob, Yenisei, and Lena, and by the Amur and its tributaries, contains much black fertile soil, on which large quantities of excellent wheat and barley are grown. The summer is short, but it is very hot, and in southern Siberia the barley actually ripens within two months after it has been sown. Cattle-breeding is carried on everywhere, and hunting and fishing are still profitable. The greatest wealth of Siberia, however, is found in the mountains, which are exceedingly rich in gold, silver, lead, copper, iron, and coal. The chief gold-fields are in the Altai Mountains and in the other border ranges; and here, as in the Klondike, the gold-bearing earth is frequently frozen so hard that fires have to be made upon it before it can be dug up for washing. Many nuggets, some weighing as much as a quarter of a pound, have been found,

and the grains of Siberian gold are said to be unusually large. Iron ore abounds in the Urals, and coal for smelting it is equally plentiful.

The great rivers are free of ice during a small part of the year only, and they lead to an ocean which is exceedingly difficult to navigate. What Siberia needed to bring her products to the European markets speedily and regularly was a railway; and a railway she now has, which stretches right across the continent for a distance of more than 4,000 miles, linking the East with the West. It is a magnificent engineering work, and is indeed one of the wonders of our time. Let us make a journey by this great Siberian railway to Vladivostok, and see something of the country, the cities, and the people as we clank along. The real journey would occupy some fifteen days.

Moscow is the European starting-point of the railway, and from it an express runs twice a week to Vladivostok. We board the train in the handsome station, and find ourselves in a comfortable car, larger and broader than those to which we are accustomed at home. It is lighted by electricity, and is well heated. The cars are connected with a large dining-saloon, in which we see a well-stocked library. The train is also provided with bath-rooms, a barber's shop, and a dark room for amateur photographers. Soon we are crossing the wide plains at a moderate speed of fifteen to twenty miles an hour. We shall not change trains until we arrive at Irkutsk, 3,500 miles away. For nine days we shall occupy this car, and for most of the time there will be little that is interesting to see.

The first town of any interest which we reach is Samara, on the left bank of the Volga, which is here crossed by a fine bridge. Near the station we see a gang of sullen-looking men, chained together and guarded by soldiers with fixed bayonets. They are convicts condemned to exile in Siberia or in the distant island of Sakhalin. Now we reach Chelyabinsk, the first station in Siberia. It is beautifully situated amongst birch groves, on the eastern slopes of the Urals, and is grow-

ing rapidly. Since the railway was opened, thousands of settlers have passed through this gate of Siberia. Many of them have received free grants of land, farming implements, and cattle, and are already prosperous farmers.

On we go across a dreary, unending plain, which is only diversified by salt marshes, and at long intervals by groves of birches. For many miles together we never see a human being. Now the train crosses the Tobol, a tributary of the Irtysh, by means of a massive steel bridge. A branch line leads northwards to the town of Tobolsk, formerly the capital of western Siberia. We must traverse other four hundred miles of the plain before we reach Omsk, "the capital of the



TOMSK.

steppes." It is built mainly of wood, and stands on the river Irtysh. The governor-general of western Siberia has his residence in the town, which is now

one of the largest butter-producing centres in the world.

The bells ring, and away we start again across the steppe towards the Ob, which we cross by a bridge 875 yards long. From it we have a magnificent view of the great river. The railway follows the course of the river, and leaves the large town of Tomsk some distance to the north, but connected with the main line by a branch railway. Tomsk is the most important town of western Siberia. It has handsome stone buildings, electric light, and all the conveniences of a European capital. There is also a university with important law and medical schools.

Now we are speeding over the central section of the Trans-Siberian railway towards Irkutsk, more than a thousand

Siberia

401

miles away to the south-east. We see a little variety in the scenery, for the country is hilly and well wooded. The villages along the route are merely collections of log-cabins surrounded by sheds and barns. The timber walls are very thick, and the crevices are stuffed with moss to keep out the intense cold of the Siberian winter. In the midst of each village is a white church, usually with a green roof and cupola. On the outskirts of the village we observe many horses, cattle, and goats.

The Siberian peasants are a simple-minded, God-fearing, and Czar-loving people. When their work is done, you may see the younger villagers footing it merrily to the music of an accordion; while the older ones sit in groups gossiping or drinking vodka, which frequently leads to wrangling and blows. Most of the men wear long, loose great-coats and heavy top-boots.



IRKUTSK.

We reach Krasnoyarsk, which is growing in importance because of the coal and iron found in its neighbourhood, and rattle over the great river Yenisei by a bridge more than half a mile long. The line now strikes south-east, and passes through country which grows more and more hilly hour by hour until we reach the Angara, a tributary of the Yenisei. We follow the course of this swift-flowing river until we come to Irkutsk, the "Paris of Siberia."

Here, after nine days' railway journey, we find ourselves in the capital of eastern Siberia, the largest city of the whole country. It is prettily situated on the right bank of the Angara, some distance from the point where it leaves Lake Baikal, and has straight streets with wooden pavements and fine public buildings. Most of the dwelling-houses are con-

(1,500)

structed of wood, but the public buildings are mainly of brick and stone.

Irkutsk is a great centre of caravan trade and the crossing place of routes which extend from the Urals to the Pacific. By-and-by all this traffic will be captured by the railway, and the caravans which patiently traverse thousands of miles will be things of the past. At present, however, towns lying away from the railway are entirely dependent on the caravans for their supplies. On the route long processions of rough carts move leisurely along, laden with tea and other goods. On every seventh cart is a rude tent, beneath which



HARBIN.

reclines the man who is responsible for seven carts of the caravan. The chief, armed with a couple of revolvers, may be noticed riding on horseback up and down the long line to see that all is well. In winter the snow-covered roads are cut into regular grooves by the horses' feet. The animals know that they can get a better foothold by walking in each other's steps, and this they do almost mechanically.

Continuing our railway journey through the Angara valley, richly clothed with larch, spruce, and birch, and passing many villages on the way, we shortly see before us the great Lake Baikal. Its shores are like those of a Scottish loch, with granite cliffs rising abruptly from the water's edge.

The lake is frozen over from December until May, and during this period there is a busy sledge traffic across the ice. The cutting of a track for the railway round the south end of Lake Baikal was a work of enormous difficulty; and for several years it was necessary to cross the lake by ferry. Now, however, the line is completed, and we sweep round the lake to the Yablonoi Mountains, and follow the course of a tributary of the Amur through an important silver-mining district. At Stretensk the railway turns south-east, pierces the Khingan Mountains by a tunnel more than a mile long, crosses the Sungari River, and then reaches Harbin. Four hundred and

eighty miles further on our long journey comes to an end in the station of Vladivostok.

Harbin is a very important junction from which a branch rail-



VLADIVOSTOK.

way runs into Manchuria, and connects the system with Port Arthur on the Gulf of Pe-chi-li, and also with Tientsin, and thence with Peking.

In former times, as we have said, the name of Siberia suggested a land of misery and despair. It was the country of exile for Russian prisoners, and to be condemned to Siberia was considered worse than death itself. Happily this state of things exists no longer. Russia no longer regards Siberia as a gigantic prison, but as a land of promise, which some day will be settled by a peaceful, hard-working, prosperous population.

There are many native half-civilized tribes which still inhabit the country. The Buriats, a Mongol race, inhabit both sides of Lake Baikal. They have slanting eyes, high cheekbones, and snub noses, and most of them shave their heads

and wear pig-tails. The Tunguses, who live in the wide-stretching country from the Yenisei River to the shores of the Pacific Ocean, are said to be "one of the very noblest types of mankind." They are partly fur-trappers, partly farmers and cattle-breeders. The Samoyedes, who live in the far north, are of a very different type. They are a little people, not unlike the Lapps; and the reindeer is their chief source of livelihood. Most of the Samoyedes are idol-worshippers. They are the most backward and untaught of all the Siberians; nevertheless, they are said to be honest and kindly.

South-western Asia

I

SOUTH of Siberia and west of India lies a great region of plateaus and hills, the table-land of Iran, stretching out towards the two great peninsulas of Asia Minor and Arabia. A few hurried peeps at some of the most interesting places in this region must conclude our survey of Asia.

If we find an old map of Asia, such as our fathers or grandfathers used in their school days, we may see a large country lying east of the Caspian Sea, and named "Turkestan" or "Independent Tartary." Almost the whole of this district has now been joined to the Russian Empire, which touches the northern frontiers of Persia and Afghanistan. These countries are as yet independent, though largely under the influence of the two great empires on their borders—Russia on the one side, and India, or rather the British Empire, on the other.

Afghanistan forms the eastern part of the great plateau of Iran. It lies mostly between two great mountain ranges, the Hindu Kush and the Sulaiman Mountains, and is "a drab-coloured land, and one of the waste places of the world." Sand, bare rocks, sterile hills, and vast snow-capped mountains are the main features of this inhospitable country. There are

few green places, fertile fields, vineyards or orchards. In summer the soil is parched, and the naked landscape appears to quiver in the fierce heat. In winter the frost is keen, and fierce blizzards rage with terrible effect.

Afghanistan is called "a buffer state," because it lies between the Russian, the Indian, and the Chinese empires. The frontier between Afghanistan and India is a great mountain barrier which is pierced only by the grim Khaibar Pass. We have already seen the entrance to this pass from India; it is a most important caravan route to Kabul, the capital of Afghanistan, which stands a hundred and ninety miles to the west, on the Kabul River. The people of Afghanistan are fierce, revengeful, and treacherous, as the British have learned to their cost in more than one bitter war.

The western portion of the plateau of Iran consists of the ancient kingdom of Persia. The greater part of its surface consists of an inland basin without drainage to the ocean, and much of it is really a salt desert. On the north, close to the Caspian Sea, is a mountain ridge, the Elburz, which reaches the height of 18,500 feet, and in the south-west another ridge about 12,000 feet high runs parallel to the Persian Gulf. The inclosed plateau varies in elevation from two thousand to six thousand feet. As we should expect, therefore, the climate shows great extremes of heat and cold, and most of the country suffers from the want of rain.

The provinces bordering on the Caspian Sea have an abundant rainfall, however; the northern slopes of the mountains are beautifully wooded; and the strip of country between



GATEWAY OF ROYAL PALACE, TEHERAN.

the mountains and the sea is rich in vineyards, olive and mulberry groves, and cotton plantations.

Persia has no navigable river except the Karun, which flows to the Persian Gulf. Famine and drought are common in this "Land of the Lion and Sun." On the other hand, wherever there is irrigation, the soil is remarkably productive. Persia produces excellent wheat, barley, millet, and Indian corn in the valleys, and much cotton, tobacco, and opium on the plains. Its fruits are delicious and varied in kind. In the south and the east the date-palm is cultivated in abundance. The staple industry of Persia at one time was the rearing of silkworms, but that industry has now almost vanished. The pearl-fisheries of the Persian Gulf are still the finest in the world.

Teheran, the capital of the country and the residence of the Shah, lies at the southern foot of the Elburz range, within sight of the beautiful volcanic cone of Demavend. Round the city are high walls with gateways, which look imposing at a distance, but at a nearer view are found to be badly built. Within are blank mud walls, narrow, ill-paved thoroughfares, and beautiful gardens with cool plashing fountains. Everything is irregular, and the general appearance is mean. The European quarter lies to the north of the town, and it alone has street lamps. Ispahan, near the centre of the country, was the ancient capital, but it is now in a state of decay.

The Persians are tall and graceful, with oval faces, black and glossy hair, and dark, full, shining eyes. They are an easy-going people, always ready to make things as pleasant as possible for every one. Well disposed to foreigners and very hospitable, they are, on the whole, fairly honest in their dealings.

There is little education in the land, though Persia in olden days was famous for its learning. The great majority of the people are strict Mohammedans, though some fire-worshippers still exist, and in the north-west there are a number of Christians. In early days Persia ranked as one of the greatest com-

mercial nations of Asia; but her neglect to make railways and roads has caused her trade to dwindle greatly. At present there are only two short railways in the whole of the country, and these are both found in the district south of the Caspian Sea.

II

The countries which we have yet to visit—the two peninsulas of Asia Minor and Arabia, together with Syria and Mesopotamia, which lie between them—are under Turkish rule. Here we find scores of places whose names have been familiar to us from our earliest years, for it is in these regions that most of the events happened which are related in the Bible. Here, too, are laid the scenes of many other old-world stories. These lands were the cradle of much that has moulded our civilization and our literature, and in them are shrines sacred to Christians, Jews, and Mohammedans.

A glance at the map shows us that Arabia has the sea on three sides and a desert on the fourth. It is thus cut off from the rest of the continent, and has little in common with it. No important trade-route passes through it, and it does not contain a railroad or a navigable river. It is favourably situated for sea-borne trade, however, and in early days its coast-dwellers were keen traders. The south coast became the seat of a large shipping trade between the African coast on the one hand and India and the Far East on the other.

Arabia is an elevated table-land, with a rim of highlands round its coast. Behind the mountains lies a belt of sterile desert, broadening towards the south into a huge waste of burning sand. This desert belt surrounds a central plateau, with long slopes which are traversed by deep valleys. The slopes are rich in pasturage, and the valleys in field and garden produce. This is Nejd, the true home of the Arab.

The climate varies greatly. While the low plains are hot and unhealthy, Nejd has its hot days followed by cool nights. In the province of Yemen, which occupies the south-west corner of the peninsula, the climate is temperate. The highland

country of Yemen is really "Araby the blest." Its fertile soil produces coffee, fruit, and vegetables in great abundance, and the cocoa-nut palm, betel, and banana trees introduced from India thrive well. The Mocha coffee grown here is said to be the finest in the world. In the mountains of Oman, which occupy the south-east corner of Arabia, the climate is pleasantly cool and healthy, and this district is fertile and well cultivated. The rains come with the south-west



THE KAABA, MECCA, DURING THE PILGRIMAGE.

monsoon, and last about five weeks; but in the north there are wide districts where rain never falls. Nejd is the region of the date-palm, and every valley is planted with this tree, which the poetical Arabs call the "king of the desert." Nejd, too, is the province in which are bred the wonderful Arabian horses. More important, however, are the swift dromedaries and camels, which are reared not only for riding and transport purposes, but also for their milk, hair, and

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flesh. In this province we may also see beautiful large white donkeys which are ridden only by people of high degree.

Arabia is very thinly peopled. All the inhabitants speak Arabic, and are devout Mohammedans, as becomes the countrymen of Mohammed, the Prophet. The men are very handsome and well built. They are courageous, frank, and bold, but they are given to cheating, and are hot-tempered and revengeful. The Arabs, especially the wandering Bedouins, are most hospitable, and the life and property of a stranger are sacred if once he has rested his hand on the tent-pole, or has tasted the bread and salt offered to him. The nomad Arabs live in tents made of goats'-hair cloth dyed black.

The only towns which we need mention are two holy cities. Mecca, the birthplace of Mohammed and the cradle of the Moslem faith, is a place of the highest sanctity, and every good Mohammedan is supposed to make a pilgrimage to it at least once in his lifetime. Unbelievers are not allowed to go into the city, but at various times a few Europeans have managed to enter it. Mecca is a handsome city of wide streets and lofty stone houses with numerous windows. At the time of the annual pilgrimage, it resembles an immense fair, at which are assembled Malays, Tartars, Persians, Arabians, Turks, Africans, and others. The most important mosque in the place incloses the Kaaba, a massive structure said to have been founded by Abraham. Its four sides are covered with black silk, which is renewed annually. Openings in the silk are left to show two sacred stones. One of these is kissed by all pious pilgrims, who believe that by so doing their sins are forgiven, and they are assured of heaven.

Second only to Mecca in sanctity is Medina, more than two hundred and fifty miles to the north. It was to this town that Mohammed fled when he was driven from the city of his birth, on Friday, July 16, A.D. 622. From this date, which is known as the Hegira, the Mohammedans reckon their dates. Ten years later the Prophet died, and his tomb is here under the flashing green dome of a beautiful mosque with four tall towers.

III

The peninsula of Asia Minor was called by the Greeks *Anatolia*, which means the "land of the rising sun." Its western part is an elevated plateau, gradually rising from west to east, and buttressed on the north and south by a series of mountain chains, which descend in terraces to the Black Sea and the Mediterranean. Lower ranges cross the plateau here and there; and in the sheltered valleys excellent wheat and many kinds of fruit, such as the grape, olive, fig, and orange, together with rice and coffee, grow with great luxuriance. The ranges fronting the Black Sea are clothed with fine forests of oak, fir, and beech. Much of the plateau, however, is waterless, and therefore barren. In the centre and south are a number of large salt lakes.

East of *Anatolia* is the Armenian plateau, the "roof of western Asia." It consists of lofty ranges of mountains, with peaks 13,000 feet in height, and fertile vales, wide plains, and rolling prairies. The highest peak is *Ararat*, the mountain on which the Ark is said to have rested after the Flood. It stands where three empires meet, and is a gracefully shaped peak 17,000 feet in height; it is always covered with ice and snow. By its side is the still more perfect cone of *Little Ararat*. Tradition says that the Garden of Eden lay at the foot of *Mount Ararat*.

South-east of this mountain lies a fertile volcanic region containing the large salt lake of *Van*. Lofty mountain ranges, which extend away to the Persian frontier, shut it in on the south. The land produces grain, cotton, tobacco, and grapes, but it is without roads, and nothing is done to encourage agriculture or industry. The capital is *Erzerum*, situated on a branch of the *Euphrates*.

From the Armenian plateau to the Persian Gulf stretches the great plain of *Mesopotamia*, watered by the twin-rivers *Euphrates* and *Tigris*. In very early times this plain was covered with prosperous cities and towns. Now, under the blight of Turkish misgovernment, the country lies waste.

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though with irrigation it may again become fruitful. It is very rich in petroleum.

On this plain are the ruins of cities which were famous at the very dawn of history. Near the busy town of Mosul, on the Tigris, is the site of the ancient city of Nineveh, the capital of Assyria. Its wonderful palaces, temples, walls, and towers have vanished, but fragments of its buildings are now being dug up, and their inscriptions tell us much about life in those far-off days. The ruins of Babylon, where Nebuchadnezzar ruled, are near the Euphrates, not far from the town of Hillah. Some two hundred miles below Mosul is Bagdad, an old walled town with fine mosques, flat-roofed houses, busy bazaars, and groves of date-palms. The name reminds us that we are now in the land of the "Arabian Nights."

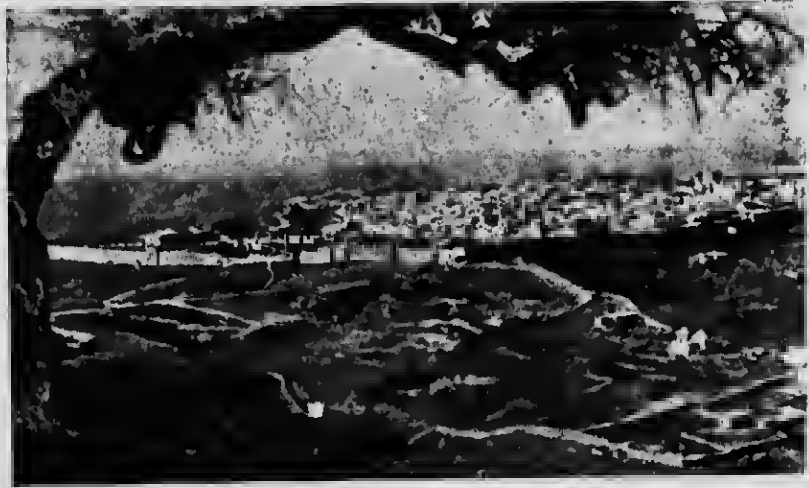
On the Tigris, passengers and goods are carried between the mountains and Bagdad on rafts of inflated sheepskins; but between Bagdad and the Persian Gulf, five hundred miles away, steamers and sailing-boats ply regularly.

There are few parts of the world where there is a greater mixture of races than in Asia Minor. The farmers, as a rule, are Turks. The Turk is a good cattle-breeder, a husbandman, or an artisan, but he hates change, and he is not clever; hence all the trade of the country is in the hands of the quick-witted Greeks and Armenians. The Turk farms his land just as his father did before him; he is ignorant, and he will not trouble himself to learn. Still, in spite of all, he belongs to the ruling race. If a Turk is killed in a Greek village in Asia Minor, all the important men in the place are sent to prison. On the other hand, a Turk who kills a Greek or an Armenian is generally acquitted. The Armenians are Christians, and they are hated and cruelly oppressed by their Mohammedan masters.

IV

Syria lies south of Anatolia, and has the blue waters of the Mediterranean on the west and the valley of the Euphrates on the east; southward it merges into the deserts of Arabia.

The western part of Syria is very familiar to us, for it is this district that we call Palestine, or the Holy Land. Though Palestine is only about half as large as the province of Nova Scotia, its interest is deep and world-wide; not only was it the battle-ground of ancient nations, the highway between the Assyrian and Egyptian empires, and the Promised Land of the Israelites, but it was the scene of the life and death of Jesus Christ. There, too, in later times the Crusades or religious wars were carried on by Christian Europe against the Mohammedan masters of the Holy Land.



JERUSALEM.

Near the coast of Syria are two parallel ranges of hills, and between them is a remarkable rift or fissure, in which the Jordan flows. The remainder of the country consists of a plateau sloping eastward to the Euphrates. In the north the hills are near the sea, and the coast plain is very narrow; south of Carmel, the hills recede and leave room for the broad, fertile plains of Sharon and Philistia. The coast ranges have different names in different parts, but perhaps the best known are the limestone hills of Lebanon and Anti-Lebanon in the north. The cedars of Lebanon, which once covered the mountains, are now represented by only a

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few small groves. In these hills rises the River Jordan, its triple source overlooked by the tall white peak of Hermon. The Jordan is a short, unnavigable stream flowing through tame scenery, yet it is of great interest because of its associations. It runs southward for eleven miles, and enters the lofty lake of Merom. From Merom the valley sinks rapidly, and the Jordan, issuing from the lake, hurries on its downward course with impetuous force, and reaches the Sea of Galilee, which lies in the rift valley more than six hundred feet below the level of the Mediterranean. The Jordan leaves this lake as a slow, turbid stream some twenty-five yards wide, and in the sixty-five miles which lie between this and the Dead Sea it falls eight hundred feet by a series of twenty-seven rapids. Darting first to the right, then to the left, then to the right again, it twists and winds so constantly that its course through these sixty-five miles of country actually measures two hundred miles. The Dead Sea lies in the lowest part of the rift valley, thirteen hundred feet below the level of the Mediterranean, and is walled in by rocky hills, bare and stern. As it has no outlet, we should expect its waters to be salt; they are, indeed, more than seven times as salt as those of the ocean.

The productions of Palestine are of little account. On the coast plain and in the uplands wheat is grown, and the olive and fig are cultivated, while on the downs of the eastern plateau large flocks of sheep find sufficient grazing. Most of the country, which was once "a land flowing with milk and honey," is now a waste of ruin and desolation.

No one can think of Palestine without recalling Jerusalem, which is sacred to Christian, Jew, and Moslem alike. It stands on a series of rocky spurs in the hill country of Judæa, and is now connected with the port of Jaffa or Joppa by a railway. The best view of Jerusalem is obtained from the Mount of Olives, which lies to the east of the city, beyond the great ravine of the "brook Kidron." On the mount itself are several churches and convents, and at the foot is the Garden of Gethsemane, which is beautifully kept, and con-

tains a number of olive trees which are said to have been growing in the days of Christ.

The most striking building in the city is the Mosque of Omar, which is said to occupy the site of Solomon's Temple. Its noble dome, massive walls, and slender minarets stand in an inclosure planted with cypresses, olives, and plane-trees. Within the city are many narrow, dirty, ill-paved streets lined with the windowless walls of flat-topped houses. The Moslems, the Christians, the Armenians, and the Jews have each their own quarter; and outside the walls to the west a modern suburb has now grown up. To Christian pilgrims the most sacred place in the city is the Church of the Holy Sepulchre, built over what is supposed to be the site of the tomb of Christ.

There is another city in Syria which is well worthy of a visit. A little way beyond the northern limit of Palestine is Damascus, one of the oldest cities in the world. It stands on a plain which would be a desert but for its fertilizing streams. With its many mosques, its tall minarets, its beautiful gardens, and the meadows, corn-fields, and orchards around it, Damascus is an exceedingly attractive place. The bazaars are full of interest, and afford a perpetual feast of colour. Damascus was once a most important trade centre, and may become so again in this era of railways.

Syria is a land of ruined cities, which in ancient days must have been places of great wealth and magnificence. To the north-east of Damascus lie the ruins of the temples, palaces, fountains, and monuments which mark the site of Baalbec, "the city of the sun-god." Palmyra, which lies between Damascus and the Euphrates, has also many remains of its ancient splendour, including a colonnade of fifteen hundred columns. The land of Bashan, in the north-east of the country, contains the ruins of its "giant cities." In many cases the stone roofs, doors, and stairs of these ancient buildings are as perfect as when they were first erected.

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AUSTRALASIA

The Commonwealth of Australia

I

WE have already mentioned the islands which lie off the east coast of Asia. In the north these form the island empire of Japan. In the far south, we see on the map a huge cluster of islands, large and small, as if half a continent had been drowned in the ocean, leaving only its mountain peaks and chains standing above water. These islands are called the East Indian Archipelago, or the Malay Archipelago. Sometimes the name Australasia is used for these islands, together with the island-continent of Australia, New Zealand, and the nearer groups of islands in the Pacific. The East Indies are rich in all natural products, and their spices have been known from very early times. By far the greater number of the islands have belonged to the Dutch since the time when Holland was the leading commercial nation of the world, and mistress of the wealth of the Indies. The British flag flies over the northern part of Borneo and the south of Papua or New Guinea; the north-east of New Guinea is German, and the Philippine group now belongs to the United States; the remainder of this archipelago is Dutch.

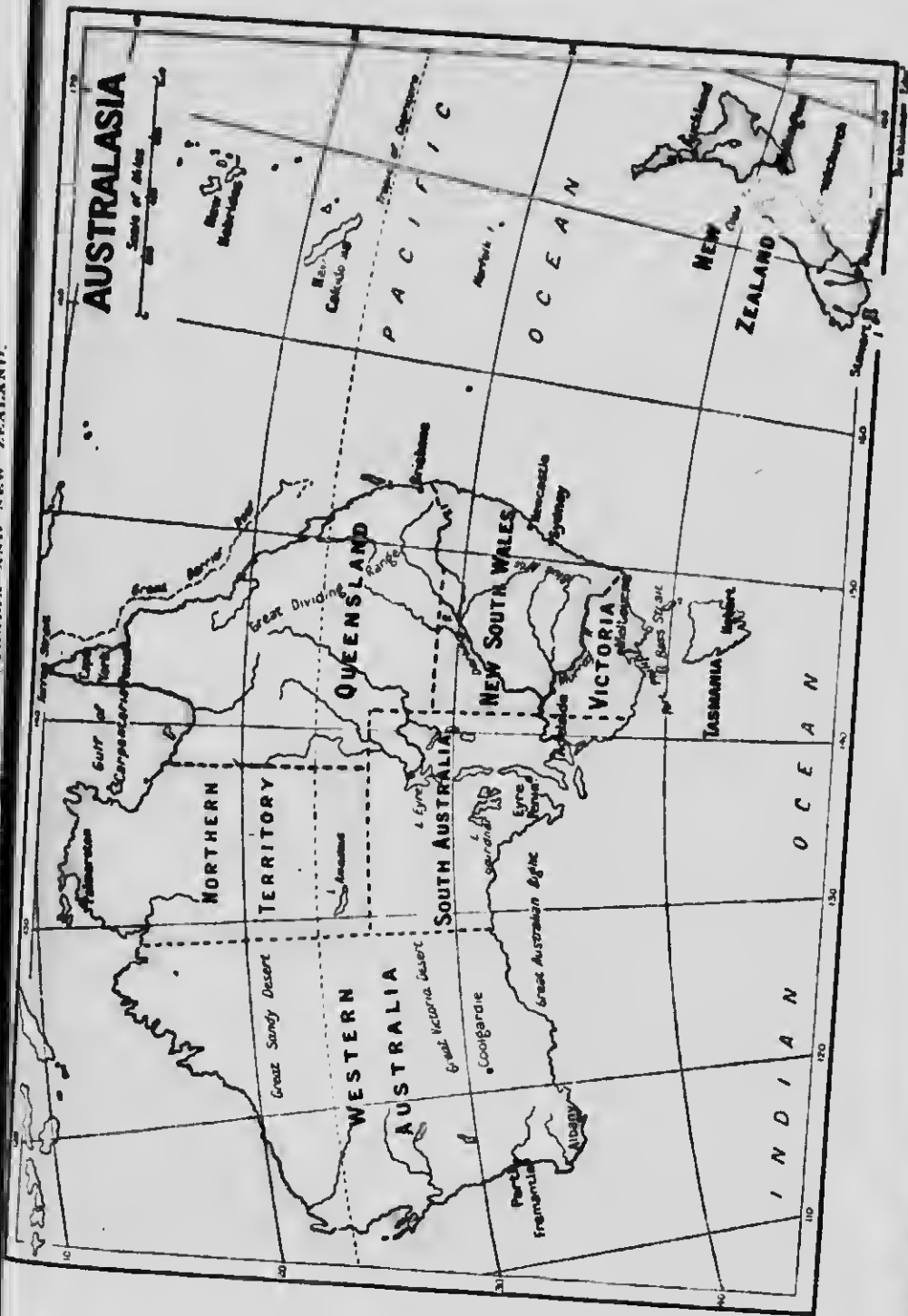
We have not time to visit the coffee plantations and rubber estates of these islands, or to see their wonderful forests. The East Indies, with all their natural wealth, can never be a white man's country. European settlers are few, and all labour must be done by the native races. We are to



RELIEF MAP OF AUSTRALIA AND NEW ZEALAND.



PHYSICAL MAP OF AUSTRALIA AND NEW ZEALAND.



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use the islands at present merely as giant stepping-stones between Asia and Australia.

When we stride across the East Indies and reach Australia, we find a very different type of country. Here is a continent which was practically unknown until a century ago, and has already a white population of more than four millions, in spite of many hindrances to colonization in its early years. The native tribes have died out in most parts, and the government is carefully restricting the numbers of black, brown, or yellow labourers who may enter the country. Australia is to remain a white man's land. This great Commonwealth is one of the sister nations of the Empire—a whole continent under one flag.

Australia is very compact in form, and has an area more than three fourths that of Canada. The relief and the consequent river systems are very easily understood. A ridge of high ground begins in the extreme south-east, and sweeps northwards parallel to the coast, and usually at no great distance from it. This great dividing ridge then turns westwards across the continent, keeping further inland, and is continued with some breaks all the way round the coast to the south-west. The south coast is bold and elevated, but not mountainous. The effect of this arrangement of the mountain system is that most of the rivers flow towards the interior. The chief river, the Murray, with its great tributary the Darling, flows as if it also would lose itself in the central plains, but it suddenly changes its course and bends southwards to the Southern Ocean. The coast rivers are mostly short and rapid.

The great central area within the ring of mountains divides into two distinct portions. The western portion forms a high plateau, ranging from 600 to 2,000 feet in height, parts of which have little rainfall and parts none. The eastern portion is less elevated, and is traversed by many rivers which rise in the coast range, and after long courses over rolling grass-lands lose themselves in the barren scrub or sandy desert, or flow into wide, shallow salt lakes, whose extent varies with the season. Only the Murray-Darling basin, as

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we have mentioned, has a natural outlet to the ocean. All these rivers are subject to heavy floods and long droughts.

Drought is the great foe of the Australian farmer. Only the fringe of the continent has an ample rainfall. The east coast ridge obtains a sufficient supply from the south-east trade winds; in the winter there is even a considerable snow-fall on the southern mountains, and the melting of this snow keeps up the current of the Murray River when it would otherwise fail. The north of Australia lies well within the tropics, and shares in the changes of the monsoons. Here the summer rainfall is heavy, especially on the north-east coast of Queensland. In the far south-western corner there is a moderate winter rainfall, sufficient for agriculture, although very irregular in its distribution. The rest of the country, amounting to about two thirds of the whole area, either suffers from prolonged periods of drought or is practically rainless.

When we speak of summer or winter rains, we must remember that in Australia, as in all lands south of the equator, summer comes during our northern winter. Christmas falls among the midsummer holidays, and is a time of picnics and camping out, not of sleighing and skating. We must also remember that the sun is in the north at midday; the north winds are warm winds, and cold weather comes from the south. There is no pole-star in the sky at night, but the Southern Cross is always visible.

Many of the plants and animals of Australia are very different from those found in other parts of the world. Almost all the trees are evergreens. The commonest of them are the eucalyptus, or gum-tree, and the acacia, or wattle. Their leaves hang vertically, which prevents the scorching rays of the sun from beating down upon their surface with withering force. Among the best known kinds of eucalyptus are the red-gum, which furnishes very hard and solid timber suitable for railway ties, and the blue-gum, which produces an oil much used in medicine. Two other species, the jarrah and the karri, are peculiar to Western Australia, and produce the most valuable timber of the continent. Jarrah is exported largely

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to India, where it is specially valued because it resists the ravages of the white ant.

The acacias are most interesting plants, and are remarkable for their usefulness, their attractive appearance, and their wide distribution over the continent. The colour and perfume of their flowers make them universal favourites, and as they are among the earliest plants to blossom, they herald the advent of spring. What is called the "mallee scrub" is a dense, cheerless thicket of bushy eucalyptus some eight or ten feet in height, and growing so close together as to be almost impenetrable. The "mulga scrub" is even worse, for it is armed with strong, sharp spines that tear the clothes and wound the flesh of the traveller. European trees and plants have been introduced, and they thrive remarkably well in their adopted home. The apples of Tasmania rival those of England, and the vine has given Australia a new industry. In Queensland we find the banana, sugar-cane, mango, guava, and pineapple, while cereals and root-crops are grown in the more temperate parts.

Many curious birds are found in Australia, but the most curious of them are dying out. The wingless emu is very much like an ostrich; it is six or seven feet in height. Black swans are seen on the lakes of Western Australia; and the beautiful lyre-bird, so called from the shape of its tail, makes its home in the north. Not less noteworthy is the bower-bird, which owes its name to its habit of building a covered bower of twigs for the purpose of amusement rather than of residence. The "laughing jackass," or giant king-fisher, is a real friend to the Australian farmer, for it is a deadly foe to snakes.

The largest of the wild animals is the kangaroo. Amongst other strange creatures is the duck-bill platypus, which has thick, soft fur, a bill like a duck's, and webbed feet with sharp, strong claws. The dingo, or wild dog, is a wolf-like creature that causes great destruction among the flocks of sheep. Foxes, which were introduced by sportsmen, are now a nuisance; but the greatest pests of all are the large bats or

flyng-foxes. The rabbit has multiplied so enormously as to be a real enemy to the farmer. Tens of thousands are now killed, frozen, and exported.

The original inhabitants of Australia, or "black-fellows," as the settlers call them, have dwindled greatly in numbers since the arrival of Europeans, and to-day there are not more than sixty thousand of them in the whole continent. They are fast disappearing, and in a few years will probably be extinct.

II

We will now make a round of visits to the five states into which continental Australia is divided, and which, along with the island of Tasmania, make up the Commonwealth of Australia. The "mother colony" is New South Wales, and its story takes us back to the year 1770, when Captain Cook and his companions landed at Botany Bay, in the course of their exploration of what was then an unknown land. Botany Bay itself was found to be unsuitable for a settlement, but round the next headland is the splendid harbour of Port Jackson. On the shores of this harbour a colony was founded in January 1788, and was called Sydney, in honour of the then Colonial Secretary.

At first the little colony suffered terribly. The new-comers, most of whom were convicts, were frequently on the verge of starvation, and many died of hunger and disease. Gradually, however, matters began to mend, and many free settlers arrived. Merino sheep were imported, and the leading industry of New South Wales was begun. By 1800 the colony had some six thousand inhabitants. Coal was discovered near the Hunter River, and Sydney became an important town.

The infant colony was confined within very narrow limits by the Blue Mountains, which form part of the Great Dividing Range. In 1813 these mountains were crossed by three determined explorers, who found beyond the barrier wide-spreading grassy plains never before seen by the eye of a white man. Settlers crossed into the new country with their

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flocks and herds, and the colony at once entered upon a more prosperous era. The sheep farmers pushed further and further back into the great western plains. Wells were sunk, and dams were made to store water; flocks and herds multiplied; there was an immense increase in the export of wool; and the growth of wheat began to engage the attention of farmers. Such, in brief, was the early history of New South Wales, which is the oldest and wealthiest of the Australian states.

New South Wales faces the Pacific Ocean, and has a seaboard of eight hundred miles. Here and there its rocky



SYDNEY HARBOUR.

sandstone wall is broken by splendid inlets; Port Jackson, or Sydney Harbour, is one of the safest, largest, and loveliest harbours in all the world. The Great Dividing Range lies at a distance of from thirty to one hundred and twenty miles from the sea, and on the slopes of this "Great Divide" are some of the finest forests in Australia. Westwards of the Dividing Range are the broad, elevated table-lands and undulating plains on which the sheep and cattle of the state graze in hundreds of thousands. Much of the soil is black earth of great fertility; but here and there are sandy ridges, sometimes covered with "mulga scrub," but more often with

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the "salt-bush," of which both cattle and sheep are extremely fond.

The coast lands, especially those on the margins of the rivers, are carefully cultivated, and produce large crops of wheat, Indian corn, oats, and potatoes. European fruit-trees flourish, and subtropical fruits—such as grapes, peaches, apricots, oranges, figs, and melons—come to great perfection. The sugar-cane is successfully cultivated in the northern districts, and much of the tobacco used is home-grown. Silver, gold, tin, copper, and iron are found, and coal is abundant in the coast districts.



CENTRAL PART OF SYDNEY.

Sydney, the capital, now spreads over both the northern and southern shores of Port Jackson. It is the oldest, most populous, and most beautiful city in Australia. All the mail steamers plying between Europe and Australia call at its fine quays. It has noble public buildings, churches, warehouses, fine shops, and a population of more than half a million. One delightful feature of all Australian cities is their open, uncrowded character. Land was cheap when they were founded, and it was not stinted as they began to grow. Sydney, for instance, covers 110 square miles, and three fourths of its inhabitants live in delightful suburbs, amidst grass, trees, and flowers, in pure air and under clear skies.

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Parramatta, which nestles among the hills at the head of Port Jackson, is a quaint English-looking town, embowered in orchards and orangeries. North of Sydney is the town of Newcastle, the seaport next to it in importance, and, like its namesake in England, a great coal-mining centre. The most important mining town, however, is Broken Hill, far inland to the south-west, in a neighbourhood exceedingly rich in silver ore.

III

The first permanent settlement in what is now the state of Victoria was made in 1834. The colony rapidly advanced, and in 1842 sent

representatives to the Parliament of New South Wales. Eight years later it was declared a separate colony, and called Victoria, after our late Queen. Victoria is the smallest of the Australian states, with the exception of Tasmania.



MELBOURNE.

Favoured by its geographical position, its moist and temperate climate, and its extensive gold-fields, Victoria now ranks next to the mother colony in population and importance. The Great Dividing Range forms the backbone of Victoria, and throws off spurs to the north and the south; of these, the Australian Alps, in the east, are famous for their beautiful scenery and their rich forests. On their southern slopes some of the trees measure from fifty to eighty feet in circumference, and are three hundred feet high.

In the year 1851 wonderful news rang through Melbourne. Gold had been discovered at Ballarat, Bendigo, and other

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places. At once there was a "rush," and vast quantities of gold were procured by the most primitive methods. In time, however, the shallow claims were worked out, and then began the era of scientific gold-mining. The yield of gold has decreased to one fifth of what it was in the palmy days, but Victoria is still the second gold-producing state of Australia. A steadier prosperity, however, is derived from pastoral and agricultural pursuits.

There are vast stretches of excellent pasture land in the state, and the wool of Victoria commands the highest price in the European markets. Agriculture is now a most important industry. Dairy-farming ranks next to the gold and



TOWN HALL, MELBOURNE.

wool industries. Tobacco and sugar-beet thrive fairly well, but the staple crop is wheat. The vine also flourishes, and Victoria is renowned for its fruits.

Melbourne, the capital, stands on the Yarra River, a short distance from Port Phillip Bay. It

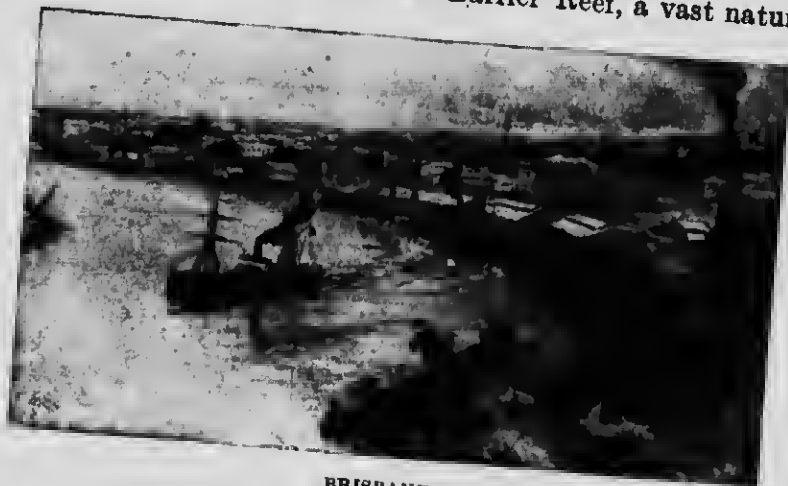
is the second most populous British city in the southern hemisphere, and the eighth city of the Empire. Its splendid public buildings, its Parliament Houses, its university and colleges, its libraries and art galleries, its magnificent parks, its railways and its water-supply, mark it out as a great and progressive city. The population exceeds half a million, and is distributed over 254 square miles.

Ballarat, the second city of Victoria, stands on the south side of the Dividing Range, north-west of Melbourne; it is the centre of the richest gold-mining district in the world. On the north side of the range is Bendigo, also a mining town, and round it are twenty-two square miles of gold-bearing quartz rocks.

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IV

To the north of New South Wales lies Queensland, the youngest of the Australian states, which was separated from New South Wales in 1859. As in the case of the mother colony, its progress was at first barred by the Dividing Range. A road, however, was discovered across the mountains; and then the famous Darling Downs, with their fine pasture grasses, were opened for settlement. Along the Pacific coast lies the Great Barrier Reef, a vast natural



BRISBANE.

breakwater of coral rock, some ten to fifty miles or more from the shore, and more than one thousand miles long. It is the greatest coral reef in the world. Between the reef and the land is a sheltered channel, but it is studded with islands, and is dangerous water except in the day-time.

Queensland has much fertile land, but many parts of it are better suited for grazing than for agriculture. Thousands of sheep are reared on the mountains and the dry inland plains, where deep artesian wells have been sunk with good results. Ranching is a great industry, and the free, open-air life on the cattle-runs is very healthy, though the work is hard and luxuries are few. In the hotter parts of

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the state sugar is grown; and as the work is too trying for white men, a great many Kanakas, or natives of the Pacific islands, have been employed. A law has been passed, however, to abolish gradually the employment of Kanakas. Gold has been found in nearly every part of Queensland, both in the rivers and in quartz reefs. Silver, copper, tin, coal, iron, and other minerals are also mined.

Brisbane, the capital, occupies a site on the Brisbane River. The city lies low, and constant dredging is required to keep open the twenty miles of river between it and the sea. Brisbane possesses many notable public buildings and well-kept botanic gardens. Northwards along the coast from Brisbane are several ports which are outlets of the mining and sugar-growing districts. Off Cape York is the fortified coaling station of Thursday Island, which is also the headquarters of the Torres Strait pearl-shell fishery.

V

South Australia extends along the south coast of the continent to the west of the three states we have described. This state was founded in 1856, and received its constitution twenty years later. In 1863 the Imperial Government added to it the immense stretch of tropical country now called Northern Territory, but this area has recently been taken over by the Commonwealth Government.

The south coast is broken by two long inlets, St. Vincent Gulf and Spencer Gulf. To the west of Spencer Gulf is the dreary Eyre Peninsula, and beyond that stretches the Great Australian Bight. North of Spencer Gulf lie the great salt lakes, which look so imposing on a map of South Australia; in the dry season they are mere stretches of mud encrusted with salt. Beyond the lakes lies the barren, waterless country known as the "Never Never Land."

The construction of the trans-continent telegraph did much to open up South Australia. This wonderful line, which is more than 1,500 miles long, crosses the continent from Adelaide,

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in the south, to Port Darwin, in the north. A railway now accompanies the telegraph from Adelaide as far as the western shore of Lake Eyre; it is to be continued right across the continent.

The richest part of the state is the long narrow belt lying to the east of St. Vincent Gulf. It is only a few miles broad, but is some hundreds of miles long, and the wheat grown on it is said to rival in quality that of Manitoba. Indeed, this part of the state may be looked upon as the "granary of Australia." In the drier parts of the state artesian wells have been sunk, and the land has been irrigated. The wines of South Australia are already important, and wool is a staple



ADELAIDE.

product. What gold has been to Victoria, copper has been to South Australia. The famous Burra Burra Mine was opened in 1845. Its yield was enormous; but the mine is now abandoned. Still richer deposits, however, have been discovered, and are actively worked, at Wallaroo and Moonta, in the peninsula between the two gulfs. Iron, bismuth, tin, and gold are also found.

Adelaide, the capital, is a beautiful, hill-girt city, picturesquely situated on a plateau. It is very clean and bright, and has been called the "model Australian city." The bulk of its trade passes through Port Adelaide, on an inlet of St. Vincent Gulf.

The Northern Territory is a tropical country. Its climate

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is too hot for Europeans, and the inhabitants are chiefly Chinese. At Palmerston, its chief town, the trans-continental telegraph line is connected with a submarine cable, which joins Australia to Europe.

VI

The vast western wing of the continent forms the state of Western Australia. Until the discovery of gold brought her into notice, she was the "Cinderella" of the Great South Land. The only settlements were in the coast districts immediately round Perth, the capital, and Fremantle, its port. The tide has now turned. The population of Western Australia is increasing, new industries are springing up, the farmer as well as the miner has discovered the land, and a prosperous future awaits her.

Western Australia is a land of wide plains, vast forests, and uninhabitable deserts. Although the coasts are deeply indented, there are few good harbours, and scarcely any rivers with a steady flow all the year round. The inhabited portions of the state extend for 1,200 miles along the west coast, the most thickly populated part being in the south-west, and extending from the town of Geraldton, in the Victoria district, to Albany, on King George Sound. Here vineyards, orchards, and wheat-fields may be seen, and cattle and sheep stations dot the valleys of the numerous rivers. Here, too, the immense karri and jarrah trees shoot up their tall, smooth columns to a height of from two to three hundred feet. Much of the interior is yet unexplored, but those who have penetrated far inland tell of unending sand-hills covered with dense acacia scrub, and barren, waterless plains, devoid of all vegetation except the terrible spinifex bush. Nevertheless, settlement has penetrated some five hundred miles inland, owing to the discovery of rich gold deposits.

It was in 1892 that the great Coolgardie goldfield was discovered. The railway had then reached a point 230 miles inland, but the gold-seekers had 130 miles beyond this to travel as best they could, and a mining town sprung up in

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rough-and-ready fashion. Then it was found that the want of water was not only a great hardship, but was likely to crush out the settlement entirely. The rainfall was light, and was soon absorbed by a porous soil. The "washing-out" of gold was impossible, and the miners resorted to the plan of blowing away the lighter dross instead. The want of water for drinking and other uses caused epidemics of fever. The sinking of wells and building of reservoirs proved useless. Drinking water sold at 60 cents a gallon. When the railway was extended to the gold-fields, it was found that the cost of water for the engines meant running every train at a loss.



PERTH.

At last the government adopted a bold and costly scheme. A reservoir was formed among the hills near the coast, large enough to hold supplies for two years, should a long drought fall upon the land. From this a line of steel pipes was laid to Coolgardie and Kalgoorlie, more than 350 miles away. But the gold-field lies about 1,000 feet higher than the reservoir: how could water be made to flow up such a line? The only way was by using powerful pumping machinery to force it along. The pipe line is divided into eight sections, in order to avoid too great pressure on the pipes, and each section has a pump which forces the water up to the next one. At length, in the end of the year 1902, this great engineering work was completed and the 30-inch steel pipes began to

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pour into the thirsty gold-mining towns their wonderful uphill stream. The town of Kalgoorlie has sprung up into a modern city with all the appliances of civilized life.

Perth, the capital, stands on the north bank of the Swan River, about ten miles above Fremantle, the chief port of the state. Mail steamers from England now call at Fremantle instead of Albany, as formerly. Broome, in Dampier Land, on the north-west coast, is the headquarters of the most important pearl-shell fishery in Australian waters.

VII

South of Victoria lies the beautiful and well-watered island of Tasmania. It is the smallest, but in many respects the



HOBART.

most interesting, of the Australian states. Its old name was Van Diemen's Land, given in memory of the Dutch explorer who sighted it in 1642. The government of New South Wales established a convict settlement on the island; by-and-by free settlers began to arrive, and a time of considerable disorder followed. In 1856 the island became a separate colony with responsible government, and its name

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was changed to Tasmania. The whole island is a picturesque and irregular succession of mountains, valleys, peaks, and glens, with a lofty table-land in the centre. In the highest part of the table-land are many beautiful fresh-water lakes, situated among romantic scenery. A great part of Tasmania is still covered with forests of magnificent timber.

The delightfully temperate climate of Tasmania has earned for the island the title of the "Sanatorium of the South." Fruit-growing is a rising industry, and immense quantities of Tasmanian apples are sent to London by the steamers which call at Hohart in the fruit season. Wool is an important article of export. Tasmania is rich in minerals. Tin has been most extensively worked hitherto, but valuable deposits of gold, copper, silver, and coal have also been discovered. The Mount Lyell mine contains gold, silver, and copper; and in the Bischoff mine tin is actually quarried like stone.

Hohart, the capital, is a pleasant town, with good streets and handsome buildings. It is beautifully situated on rising ground at the foot of Mount Wellington, at the mouth of the river Derwent.

The Dominion of New Zealand

WE now leave the Commonwealth of Australia, and sailing for 1,200 miles in a south-easterly direction, we reach the Dominion of New Zealand, one of the sisterhood of free nations which make up the British Empire. New Zealand is an island state, with no near neighbours. Far away in the north-west is Australia; southwards, to the Antarctic ice-fields, nothing breaks the vast expanse of sea but a few islets tenanted by seals and sea-birds. To the north are the coral islands of the Pacific; and to the east 4,000 miles of ocean lie between it and the shores of South America. New Zealand consists of two main islands, known as North Island and South Island, and the small, rugged, forest-clad Stewart Island. These islands are widely different from

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Australia in character. The gray yellow plains with their dust and drought have vanished; so have the vast table-lands, the flat-topped hills, and the wide, rolling downs. New Zealand is a narrow, sea-girt land, with deep bays and steep peninsulas, great lakes and foaming rivers, snow-capped mountains and volcanic peaks. From most of these the sea is in sight on a clear day, and fresh water is always at hand. The colony well deserves its Dutch name—"Sea-land."

North Island is much more irregular and more deeply indented than South Island. In the north is a long, narrow peninsula, abounding in fertile and well-watered valleys; while the main part of the island consists of gently-sloping hills and low-lying table-lands, with here and there a lofty volcanic peak. On the west coast, at the entrance to Cook Strait, is Mount Egmont, an extinct crater of a beautiful conical shape, covered with an everlasting crown of snow. In the centre of the island is a remarkable volcanic district full of lakes, hot springs, and geysers. Still farther south is a wild highland region, in which two huge volcanic cones rise above the surrounding hills. Round Hawke Bay, on the east coast, are some of the finest pastures in the island.

South Island is longer and more compact than North Island. A mountain ridge, known as the Southern Alps, runs along its western side from north to south. Here we find peaks and glaciers rivalling those of our Canadian West. Running through the middle of the island, parallel with these heights, is a lower range, from which the country sinks in terraces to the eastern coast. While the western part of the island is fit only for miners, shepherds, and timber-cutters, we find large tracts of flat or undulating country towards the east coast. The largest of these is the Canterbury Plains, where we see the most fruitful of cornfields and gardens.

The coast of South Island is bold, and for the most part without deep indentations, except on the north and part of the west coast. The latter coast is especially grand, for the long line of cliffs, backed by the snowy peaks of the Southern Alps, is broken by long fiords or "sounds," in which the water

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lies deep and still under the shadow of giant crags. The outer cliffs stand bare and sullen-looking in their gloomy grandeur; but on the shores of the sheltered fiords are dripping jungles, ferny ravines, and moss-clad precipices of extraordinary beauty. In many places, blue glacier streams leap over the cliffs, and dash themselves into spray long before they reach the water below. Dusky Sound, and Milford Sound with its famous Mitre Peak, are perhaps the most beautiful of all these fiords.



MILFORD SOUND AND MITRE PEAK.

Much of the country, especially on the mountain ranges, is still clothed with dense forests. The huge kauri pine, often from eight to ten feet in diameter, and as much as two hundred feet high, flourishes in the northern half of North Island. Its timber is very valuable, and it produces a resin which is much used in making varnishes. The lower hills are usually covered with ferns of the most wonderful variety. High up on the lofty mountains there is a beautiful Alpine vegetation.

The monarch of New Zealand mountains is Mount Cook,

(1,580)

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which stands near the middle of the west coast of South Island. It is over 12,000 feet high. Around it are many other vast peaks covered with white glaciers, one of which is eighteen miles in length. The mountains of North Island are mainly volcanic in origin. Indeed, near the centre of the island, there are more than sixty cones and craters within a dozen miles, and for hundreds of miles the country is overspread with pumice, volcanic ash, and lava streams. The two most striking volcanoes are Ruapehu and Tongariro, the latter of which has three craters. A few miles to the north of these active volcanoes lies Lake Taupo, the largest lake in New Zealand. The river by which it is drained leaves the lake as a broad, placid stream, but soon rushes into a narrow valley, where it passes through a remarkable group of hot springs extending for more than a mile along its banks. The river is bordered by rocky basins of boiling water, from which cascades descend in clouds of steam, while here and there geysers shoot up steaming columns of water. No fewer than seventy-six separate clouds of steam have been counted from one station in this remarkable valley.

To the north-east of Lake Taupo is the Hot Lake district, containing more than sixteen lakes. Here are some of the most wonderful sights in the world. Clouds of steam rise from every crack and crevice, and the very air in many places is heavy with sulphurous vapour. Mud volcanoes are frequent; and geysers, finer than those of Iceland or of the Yellowstone Park, throw up jets of boiling water, which fall back into natural stone basins. The ground itself, though apparently solid, is a mere crust, beneath which scethes a vast reservoir of boiling liquid mud.

At one time the water from one of the hot lakes poured down over two sets of beautiful terraces called the Pink and the White Terrace. They formed a series of basins—tier upon tier—filled with hot water of a clear blue tint, while the terraces themselves showed a variety of colours, especially pure white, pink, and blue. These basins formed natural baths, in which the natives were never tired of bathing. The

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Pink and White Terraces were in their full beauty, when, one day in June 1886, Mount Tarawera, which overlooked the lake, suddenly became active. A terrible earthquake shook the ground; a fiery column shot up from the mountain, and torrents of lava and boiling mud streamed down its sides. The hot lake and three native villages were blotted out, miles of country were buried beneath a thick coating of mud and volcanic ash, and the terraces were hidden for ever by a flood of lava.

In spite of this great loss, there are many wonders still to be seen in the district. The New Zealand Government has built a sanatorium on a neighbouring lake, and persons suffering from rheumatism and other complaints come great distances to bathe in the hot waters. There are five different kinds of springs, and a large warm swimming-bath. Hotels have been erected near by for the accommodation of visitors.

New Zealand has a very varied climate. In North Island frost and snow are almost unknown except on the elevated tablelands, and in the extreme north the heat is semi-tropical, though tempered by the nearness of the ocean. South Island lies in the path of the westerly storm winds. These bring a heavy rainfall to the mountain ridge, and then descend on the eastern plains like Chinook winds, warm and dry. The Canterbury Plains have a climate which is unsurpassed for agriculture. Perhaps the greatest drawback to the climate of New Zealand is the wind, which is often very violent, especially in the straits between the islands. The towns on these straits are said to have hardly a calm day in the year. On the whole, however, the climate is mild and bracing, with few extremes, and is well fitted for a white population.

New Zealand was discovered by the Dutch explorer Tasman in 1642, but the Dutch did not follow up their explorations by making permanent settlements. In 1769, Captain Cook undertook a voyage round the world, which in those days was considered a very great undertaking. In the course of this voyage he reached New Zealand, and spent six months in surveying the coast. Cook was the first white man to

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land in the country, and he took formal possession of it in the name of Britain. For about seventy-five years after this, the Maoris, or natives, were left almost undisturbed. The first genuine settlement was founded in 1814 by Samuel Marsden, the missionary, and from that time traders from New South Wales began to visit the islands.

A New Zealand Company was formed, which began to buy land from the natives, and founded settlements at Auckland and New Plymouth in North Island, and Nelson, Otago, and Canterbury in South Island. The Maoris probably did not in the least understand what they were doing when they parted with large tracts of their country. By-and-by war broke out between them and the settlers, and continued from time to time until 1871. The Maoris fought well, and displayed courage which made them feared, and chivalry which made them respected. At last they were overcome, and much of their land was taken from them; but the rest was secured to them, and they are still large landowners. They now share in the government of the country on equal terms with the British; they own sheep and cattle; many of them speak and read English.

Even before the coming of the white men among them, the Maoris were much superior to most savage races. They decorated their houses with fanciful carvings and gaily-coloured designs. They cultivated a kind of flax, and knew how to weave it into mats and cloth, which they dyed with various kinds of bark and roots. They had songs and proverbs, stories and traditions, which they handed down orally from father to son. They were great orators and poets, as well as warriors, huntsmen, and seamen. The Maoris are a cheerful race, very fond of games, riding, and feasting. For a time it was thought that they were gradually dying out. There are only about forty thousand of them left, but at present there seems to be no danger of their disappearance. Four Maori representatives sit in the New Zealand Parliament.

New Zealand received self-government in 1852. The

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colonists are healthy, energetic, and enterprising. There is no poverty and no poor law, drunkenness is very rare, and the people are amongst the most prosperous in the British Empire. Vast flocks of sheep and cattle are fed on the Canterbury Plains in South Island, and near Hawke Bay in North Island. Wool is, therefore, one of the chief productions of New Zealand. Immense quantities of frozen beef and mutton are sent to the Old Country every year. Butter and cheese of splendid quality are made in factories worked on the Danish system.



WELLINGTON.

While wool is the mainstay of New Zealand, she has a variety of other products. Wheat is largely grown, and though it is not so good in quality as that of South Australia, the yield is three times as great. Oats and barley are exported largely to South Africa. Oranges, lemons, peaches, grapes, figs, and melons grow out of doors in North Island. Gold was discovered in 1861, and New Zealand now rivals Australia as a gold-producing country. Silver, which is found near the gold, is becoming important. Copper and tin exist, and from the iron-sand which abounds on the coasts a fine quality of iron is smelted. Coal is found in large quantities both in North and in South Island, and some of it is so good that it

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is used by British warships. Petroleum is also found, and sulphur is obtained from the volcanic districts.

Wellington, the capital of the Dominion, is not the largest town, but it has been adopted as the seat of government on account of its central situation. It stands on a splendid natural harbour on the northern side of Cook Strait, in North Island, and is a rising and beautifully situated town; unfortunately the neighbourhood is subject to earthquake shocks. Auckland, the largest town and the leading sea-port, stands on the northern peninsula of North Island, overlooking a magnificent harbour. It is the pleasantest town in the Dominion, and the scenery round about it is wonderfully beautiful.

Three towns of South Island are also worthy of notice. Nelson, on Tasman Bay, is the outlet of a province famous for its grand mountain scenery and its mineral wealth. The English-looking city of Christchurch stands in the midst of the rich pastoral and agricultural district known as Canterbury Plains. All around it are English-looking fields, hedges, and gardens, and in the town itself are fine buildings. Dunedin, on the south-east coast of South Island, stands on a bay running nine miles inland from Port Chalmers. It is the most important commercial town in South Island. It has a profusion of gardens and trees, and round the city is a belt of park land. The richest gold-fields of the Dominion are found close by.

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AFRICA

I

AFRICA lies at the very doors of Europe and Asia, yet until quite recent times the greater part of it was unknown to civilized men. Even when America had been explored from sea to sea, and when the British were ruling in India and were making homes for themselves in Australia and New Zealand, most of Africa remained a sealed book.

The northern shores, as we have mentioned in an earlier chapter, were well known to the ancients, but of the interior they believed the most wonderful and impossible stories. At the close of the fifteenth century the Portuguese, seeking a sea-road to India, followed the western shore of the continent, and sighted its most southerly point. Navigator followed navigator, and slowly but surely the outline of the coast became known, though the interior was still a blank. Not until the middle of the nineteenth century did a white man force his way into the heart of this mysterious continent.

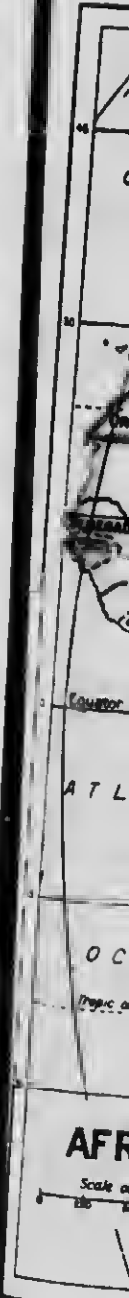
Why did Africa remain unknown to the civilized world so long? Why did it baffle explorers when the East and the West were yielding up their secrets? To answer these questions we must study the geography of the continent. Men were eager to explore it, but Nature put many obstacles in their way. We shall see what these obstacles are when we have obtained a bird's-eye view of the continent.

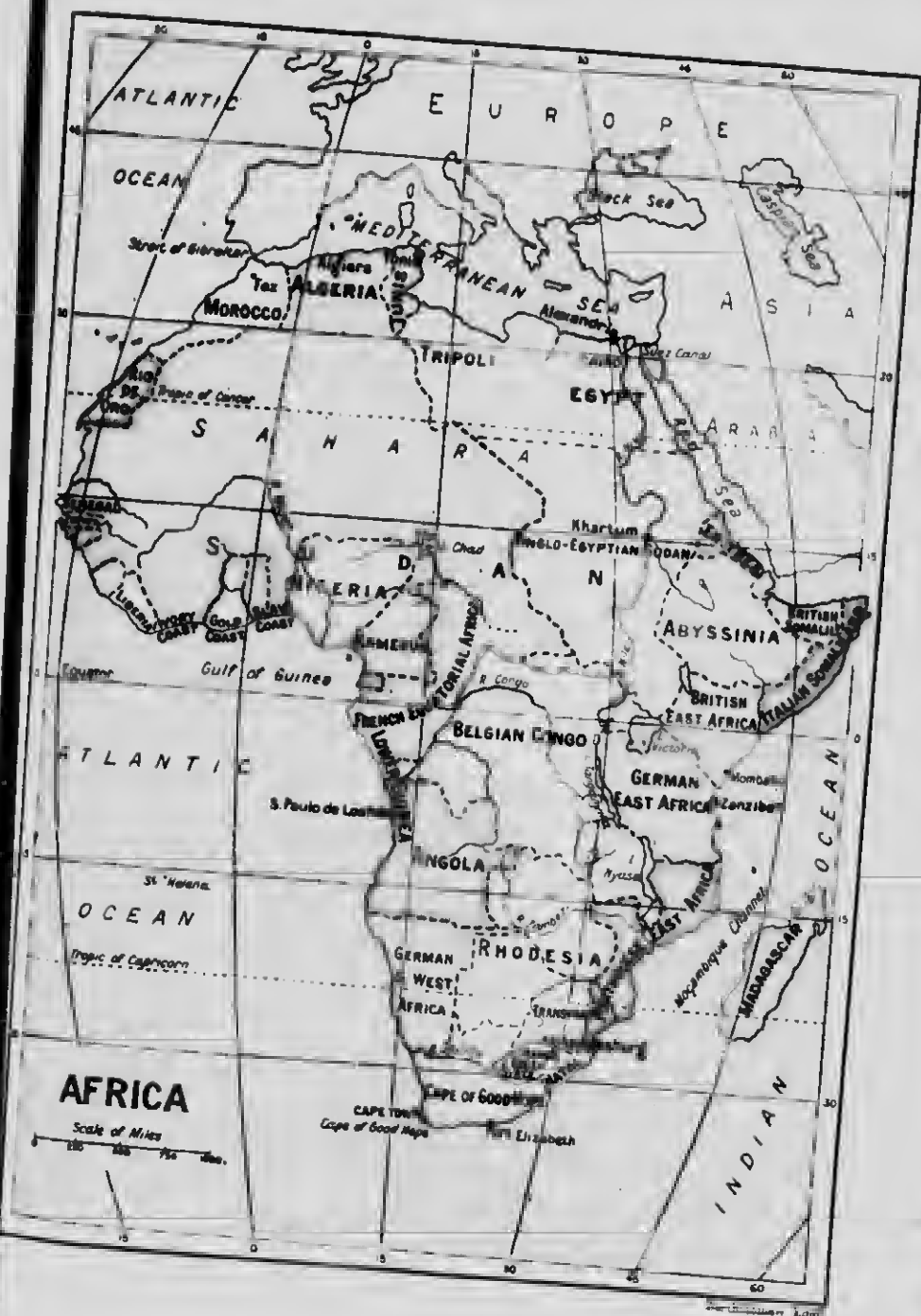
We will suppose, then, that we have the whole of Africa spread out below us like a map. What do we see? We see a vast land-mass, tapering to the south, almost separated by



RELIEF MAP OF AFRICA.

narrow seas from the rest of the Old World. We cannot help noticing that the coasts of Africa are very unbroken. The shores sweep in and out in gradual curves, and there are no inlets piercing the land and bringing the sea within easy reach of the interior.

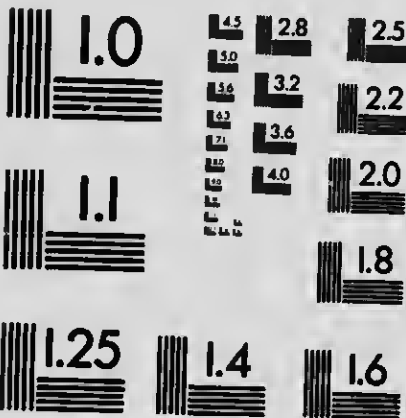






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Now let us look at the relief of the country. Most of the surface consists of high plateaus, but near the coast is an almost complete rim of highlands. The northern half of Africa is much lower than the southern half, but it contains the Atlas Mountains, the one great mountain chain of the continent. In the east, near the shores of the Red Sea, are the Abyssinian Mountains, which form a lofty highland region with deep gorges. From the Abyssinian Mountains southwards extend two long valleys which seem to be cracks or rifts in the earth's crust. Each of these rifts contains a string of large lakes, and between them is Victoria Nyanza, or Victoria Lake, which is nearly equal in size to Lake Superior. Overlooking both the western and the eastern rifts are several extinct volcanoes, which are the highest summits in all Africa. This eastern line of highlands is continued towards the south of the continent, and there forms the Drakenberg Range. A belt of highlands also fringes the western coast of South Africa. The rivers of the continent are either very great or comparatively small. The very great rivers flow down the long inner slopes of the plateaus, and traverse great distances before they break through the opposite fringe of highlands and find their way to the sea; and where they break through the ridge their courses are much impeded by cataracts. The rivers which flow across the narrow coastal plains are small and unimportant.

Now we can understand the difficulties which the early navigators had to contend with. The sailors of the fifteenth century, creeping along the coasts in their ships, could find no deep gulfs or open river mouths by which they might enter the land for any great distance. If they landed, they found in front of them swampy plains densely overgrown with vegetation, breathing out deadly fevers, and inhabited by dangerous wild animals. Beyond these plains there were mountains to be climbed and fierce savages to be fought. So Africa was left almost entirely alone, and the map of its interior has only been filled up, and that but roughly, within the memory of men still living.

II

When we examine the map of Africa, we notice that the equator crosses the middle of the continent, and that by far the greater portion of it lies within the tropics. Only the northern and southern extremities are in the temperate zones. Within the tropics, and especially on the low-lying coastlands with their steaming heat, there is little difference between summer and winter. In the elevated regions, however, we find a considerable difference between the two seasons. As that portion of Africa which lies under the equator is mostly elevated, the climate in that latitude is often pleasantly cool. The hottest part of Africa lies between ten and twenty degrees north of the equator, where the elevation is lower.

The greatest amount of rain falls in the neighbourhood of the equator and on the coast of the Gulf of Guinea, where there are seasonal or monsoon winds which bring two rainy seasons in the year. Thus copiously watered, the vegetation becomes wonderfully luxuriant, and vast, dense forests are found. In these regions, too, the great rivers of the continent take their rise. Beyond the tropics we find that all the rain falls during a few weeks or months, while the greater part of the year is dry, and the rivers cannot maintain a steady flow all the year round.

On either side of the equatorial region there are parts of the continent where rain seldom or never falls, and which are therefore deserts. There are two of these great arid tracts, the Kalahari Desert in the south-west, and the enormously greater Sahara in the north. Why is the Sahara a desert? Its great land-mass is remote from the ocean. Its Atlantic coast lies in the trade wind belt, and the main air currents blow from the land to the sea, while the Atlas Range screens it from the moisture-bearing winds from the north. The southerly winds bring a certain amount of moisture, but there are no mountain ranges in the interior to condense the clouds into rain. When rain does fall on the desert it soon sinks below the surface, and sometimes comes to light

again in the form of springs. Where these springs appear, or where the underground waters are tapped by artesian wells, the desert blossoms as the rose, and the green and fertile oases round the wells are havens of rest and shade to dusty and parched travellers.

Throughout the day the sun beats down with pitiless force, until the sand is almost hot enough to cook an egg, and the rock blisters the hand that touches it. When the sun sinks, however, the air becomes suddenly cold. The hot ground radiates its heat into the clear, dry air, and the thermometer falls greatly. It is not uncommon for the traveller to find his water-pot covered with a thin coating of ice before sunrise.

We must remember that while the seasons in Africa north of the equator correspond with those of our own country, they occur at opposite times south of the equator. Thus, when the winter snows glisten on the Atlas Mountains, the summer heat is burning up the grass on the South African veld; and when the sun is ripening the Algerian grapes for the vintage, the winter rains are bringing fresh life and verdure to the parched lands of the Cape of Good Hope. Over the great bulk of Africa, however, the seasons which are most important are not summer and winter, but the rainy and the dry seasons.

III

In order to get a general idea of the plant life of Africa let us make an imaginary journey across the continent from north to south. In the lands fronting the blue Mediterranean we find the vegetation very similar to that of southern Europe. We see the same forests of oak, the same groves of olive and fig, the same vineyards and wheat-fields. As, however, we cross the watershed and reach the inhospitable Sahara, the vegetation becomes scanty and stunted. On the borders of the desert, prickly bushes, such as the gum acacia, take the place of forest trees, and the only plants which are found grow

in tufts, with bare spaces between them. The desert itself, but for the graceful date-palm, which blesses and beautifies every oasis, is almost entirely devoid of vegetation.

After passing the desert we reach wide steppes with scanty vegetation, similar to those on its northern edge, and as we approach the moist regions of Central Africa we come upon great grassy plains or savannas. Except in the vast forest regions of the Congo basin and the Guinea coast, these savannas extend across the equatorial regions and as far south as the Zambezi. Sometimes they are one mass of dense, low scrub; sometimes they are overgrown with reeds and grass twice or three times the height of a man; and sometimes they consist of fine turf with clumps of trees dotted here and there, and fringing the courses of the streams. Upon these savannas is frequently seen the immense baobab or monkey-bread tree. Huge and clumsy, with a swollen trunk often measuring one hundred feet round, it has thin spindly branches, bare of leaves save for two months in the year, and hung for the rest of the time with large, gray-brown calabashes.

When we reach the regions of greatest rainfall we find a tropical vegetation of the greatest luxuriance. Round the Gulf of Guinea, and especially about the lower courses of the Niger, are great areas of dense and tangled forests. Still more dense and tangled are the primeval forests of the Congo. Everything in them is on a gigantic scale. Without a break they cover thousands of square miles, and so thickly are the trees massed together that the light of day is shut out, and we travel in a dim green twilight even at midday.

South of the Zambezi we find waterless wastes along the west coast, and adjoining them vast barren steppes known as the Kalahari Desert. This broken plateau has no regular supply of water, and is swept by scorching winds. Most of the land is covered with a gray, lifeless-looking scrub. Whenever there is water we see tall acacias with gray-green trunks and a thin but vivid crown of foliage, amidst which glitter spiteful thorns. After the heavy showers which occur in April the ground is gay for a few weeks with bright flowers.

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To the east of this desert extends a great plateau region, well wooded in places, but for the most part covered with thin grass, which is beautifully green after the winter rains, but bare and parched during the summer months. At the southern extremity of the continent there is a great richness of plant life, especially of flowering heaths, which after the rains spangle the ground with the brightest of blooms. The silver tree, everlasting flowers, the arum lily, and many valuable timber trees, together with grapes and tobacco, Indian corn or mealies, and other grains, grow freely.

Africa is the last retreat of the largest wild animals of the world. Most of them are found in what is known as the Ethiopian Region—that is, south of the Tropic of Cancer. North of this line Africa is poor in animals, the most important being the camel, which has its home on the northern deserts.

The vast savannas, with their abundant pasture, are the home of the tall and graceful giraffe, the striped zebra, and a wonderful variety and number of antelopes. Lions, leopards, hyenas, and jackals roam over the same regions in search of prey. Near the tropical streams and swamps the clumsy rhinoceros and the huge, unwieldy hippopotamus, or "river-horse," are common, and the crocodile abounds in the rivers. Snakes and other reptiles, many of them large and poisonous, are found almost everywhere.

The African elephant is chiefly found in the forest regions, which are also the home of the gorilla or great man-like ape. Monkeys are widely distributed; and birds of all kinds abound, the largest being the ostrich, which thrives either wild or in captivity in all the drier parts of the continent.

IV

When we speak of Africa as the "Dark Continent," we refer not only to men's long-continued ignorance regarding it, but also to the barbarous condition of its inhabitants. We must not, however, suppose that all its inhabitants are

barbarous, or that they are all black. Some of the native tribes, especially those near the Mediterranean, are comparatively civilized, and they vary in colour from yellow to brown, and from brown to black. The lighter-coloured races live in the more temperate parts of the continent, and the darker ones in the tropical regions.

Four great races inhabit Africa. Those in the north are known as Hamites and Semites, and are so called after Ham and Shem, two of Noah's sons. The Hamites occupy Egypt, Algeria, Morocco, the habitable parts of the Sahara, and the eastern horn of Africa; while the Semites are chiefly the Arabs of the north and north-west, and the inhabitants of Abyssinia. Both of these races are of varying shades of brown, and both have oval faces, aquiline noses, and well-formed features. With the exception of the Abyssinians, they are Mohammedan in religion, and as they dwell in dry regions, they are chiefly pastoral peoples.

The two great races which inhabit the central and southern parts of the continent are the Negro and the Bantu. The Negro is found in a belt of country extending from the Tropic of Cancer to within a few degrees of the equator, and the rest of "black Africa," with the exception of the south-west corner, is the domain of the Bantus. The negroes vary as much in colour and features as they do in manners and customs. In the Sudan we find huge jet-black negroes, remarkable for their fine stature, good features, and noble bearing, while not far away there are negroes with light complexions and even with light hair.

Livingstone, who knew them well, said that, after all, the negro is no better and no worse than the rest of the sons of men. Life is so easy to him in his native home that he has never developed the qualities of industry, self-denial, and forethought. As a rule, he is a tiller of the soil and a member of a petty tribe, but not of a nation, for the negroes have never yet united in a strong and stable kingdom. He lives in a hut built of mud, reeds, or grasses, and wears little or no clothing. He believes that the world is full of the spirits

of the departed, and that these spirits often inhabit the bodies of animals. Hence he sometimes worships snakes and other creatures. Amongst the negro tribes human sacrifices are common, and witchcraft is rampant.

Lighter in colour than the negroes are the Bantus, who occupy by far the greater portion of "black Africa," and seem to have had their original home somewhere about the centre of the continent. Some two thousand years ago these Bantus spread out from their old domain and swept over the southern half of Africa, driving before them the smaller and weaker peoples, who took refuge in dense forests or dreary deserts. The many tribes of the Bantus differ in appearance, manners, and customs; but all speak languages which closely resemble one another. The most vigorous and energetic of the Bantus are the Kafirs, who occupy some of the finest lands in South Africa, and live a free, independent life amidst their flocks and herds. Their great military power was the scourge and terror of South Africa until it was broken up by the British in recent times.

In the extreme south-west of the continent we find the remnants of the races which were once supreme in South Africa, but were overwhelmed by the all-conquering Bantus. Here is the wretched Bushman, perhaps the lowest and most debased human being on the face of the globe. He neither keeps flocks and herds nor tills the soil, but wanders from place to place, shooting game with his poisoned arrows. When game is not to be found, he lives upon roots, berries, ants, locusts, and snakes. The dwarf tribes of the dense Congo forests resemble the Bushmen in being descended from the primitive Africans. More numerous than these tribes are the Hottentots, who live to the south-west of the Zambezi. They are a mixture of Bantu and Bushman, and only differ from the latter in having yellowish-brown skins, more prominent cheek-bones, and a stronger build of body. They are a pastoral people, once happy and prosperous, but now declining in numbers and in wealth.

V

The exploration of Africa has been done mainly in connection with its four great rivers. The first African river to be explored was the Niger. This river rises on a plateau to the north of Sierra Leone. At first it flows north-east for a thousand miles, as though making for the Nile; then it sweeps round to the south-east, as though it intended to join the Congo; and finally it turns southwards, and after a course of more than 2,500 miles, its mud-laden waters creep through many mouths into the Gulf of Guinea.

The Niger was one of the first geographical puzzles of Africa to find a solution. As far back as 1788 an association was formed for the special purpose of exploring the river, and seven years later a young Scotsman, named Mungo Park, was sent out to solve the riddle. In this and in a subsequent journey he discovered the source of the Niger, and traced its course as far as Busa. There he and his companions were attacked by natives, and to save themselves from capture jumped overboard and were drowned. His sad fate only stimulated others to follow in his footsteps, and by 1828 no fewer than five Niger explorers had perished. The riddle was at last solved by Richard Lander, an Englishman. He and his brother journeyed overland to Busa, and thence paddled down-stream in canoes, until, two months later, they reached the sea at the mouth of the Brass River, one of the many branches by which the Niger enters the Gulf of Guinea. From that day to this, British, German, and French explorers have been adding to our knowledge of the river, until now there is not much of its course which has not been traversed and marked down on our maps.

The most famous of all African rivers is the Nile. That river was an awful mystery to the ancient Egyptians, who worshipped it as a god. No man knew whence it came, and once a year it was swollen by a flood laden with rich mud, which, when spread over the land, produced fields of waving

corn. As Herodotus, the Greek historian, tells us, the land of Egypt is the gift of the Nile.

If we examine the map of Africa, our eye will be attracted by a group of great inland seas, the largest of which is crossed by the equator, and is known as the Victoria Nyanza. Entering the lake on its western shore is the river Kagera, which rises in German territory a little to the south of the equator. This river is said to be the head stream of the Nile. Leaving the Victoria Nyanza by the Ripon Falls at its northern end, and flowing to the north-west, the Nile races between high and rocky walls, and leaps in snowy foam over the Murchison Falls. Then it enters the second of its reservoirs, the Albert Nyanza, which, by means of the Semliki River, receives also the waters of a third reservoir, the Edward Nyanza. From these inland seas, which are fed by tropical rains, the Nile derives its steady and never-failing supply of water.

Issuing from the northern extremity of the Albert Nyanza as the Bahr-el-Jebel, the river flows northward, and is joined on the left bank by the sluggish Bahr-el-Ghazal, or Gazelle River, and on the right bank by the more rapid Sobat. Onward the combined stream rolls with a clear, silvery flood, which gives it the name of the White Nile, through the grassy plains, the thickets, and the forests of the Sudan. In this part of its course the river is navigable for fairly large steamers; though till recently it was much impeded by masses of vegetation known as the *sudd*, which choked the river and made passage almost impossible.

At Khartum the White Nile is joined by the turbulent torrent of the Blue Nile. The Nile floods are caused by this river, which rises in the rugged plateaus of Abyssinia, and is fed by heavy seasonal rains. The united stream, which is now of a reddish-brown colour and seven hundred yards broad, rolls northwards, and reaches the first of the six cataracts or granite barriers which impede its course before it enters Lower Egypt. These cataracts are better described as rapids, which are caused by the sudden compression of the river into a narrow channel obstructed by numerous islands of rock.

Still farther north the Nile is joined by the Atbara. This river rises towards the north of Abyssinia, and in many a rapid and cascade bursts through the rocks which fence in the Nile valley. After receiving this river, the Nile flows on for eighteen hundred miles in a cleft of the desert plateau without receiving a single affluent of importance. The long narrow valley of the Nile comes to an end at Cairo, where the river branches out into a network of streams. The bulk of the outflow, however, is carried to the Mediterranean through two channels, called, from the towns at their mouths, the Rosetta and Damietta branches. Between these two arms is the triangular area known as the Delta, from its resemblance to the fourth letter of the Greek alphabet (Δ).

The story of the Nile exploration is far too long to tell here. The ancients knew nothing of the river south of the great bend which encloses the Nubian desert; but Ptolemy, who wrote in the second century of the Christian era, declared that it rose in the Mountains of the Moon, near the equator, and in his map he showed a series of lakes from which the river issued. Not until the nineteenth century was more than half over were his guesses verified by the discoveries of Speke, Grant, Baker, Stanley, and other explorers.

The river Zambezi is closely associated with the name of the great Scottish missionary traveller, David Livingstone. This is the only great river of Africa which enters the Indian Ocean. It sweeps in a double curve across the continent, and some of its affluents have their sources quite close to those of the vast river Congo, which falls into the Atlantic. The course of the Zambezi is much impeded by falls and rapids at various points, which make navigation impossible. On its course are the famous Victoria Falls, one of the world's wonders, and more magnificent than even Niagara.

It was in November 1853 that Livingstone began his first journey along the Zambezi, and three years later he completed it, after travelling 11,000 miles through absolutely unknown country. Later he turned his attention to the country north of the Zambezi, where he spent the remaining

years of his life in exploring what he supposed to be the head waters of the Nile, but what was really the Upper Congo. He had been lost to civilization so long that an expedition under H. M. Stanley, an American explorer of British birth, was sent to discover him, "alive or dead." Stanley found the grand old traveller at Ujiji, broken in health, and almost without stores or resources of any kind.

With the arrival of Stanley, Livingstone entered upon a new but brief lease of life. He again began the work of exploring and mapping out the great lakes which he had discovered. Before long, however, sickness returned, and he was carried to the village of Chitambo. Here he died, and here his heart was buried. His body was reverently carried to the coast and shipped to England, and was laid to rest in Westminster Abbey.

The man who found Livingstone did for the Congo what Livingstone had done for the Zambezi. In 1874 Stanley began a long and perilous journey from the east coast. He sailed round Victoria Nyanza, visited Tanganyika, launched his boat on the head-waters of the Congo, and did not quit the river until he reached the sea. The Congo, as we now know, begins in the Chambezi River, and has its chief reservoir in Lake Bangweolo. Thence it flows as the Luapula River to Lake Mweru, and after leaving that lake it is known as far as Nyangwe as the Lualaba. Receiving the overflow of Lake Tanganyika and the tribute of many immense streams by the way, the river strikes to the north-west as far as the equator, where its course is impeded by the Stanley Falls. From this point, which is 1,300 miles from its source, the Congo makes a magnificent sweep to the north of the equator, and then flows south-west, receiving on the right bank a giant tributary, the Ubangi, which rises near the Albert Nyanza. Before reaching the Atlantic the Congo receives on the left bank another great tributary in the Kassai River, which drains the northern slopes of the plateau on which the Zambezi rises. The length of the river is about three thousand miles, and it pours into the Atlantic a flood of water second only to that discharged

by the Amazon. Such is the volume of the mighty stream that it forms no delta at its mouth.

The Congo and its great tributaries are now the chief high-ways of trade to the interior of Africa. A railway has been built to carry traffic past the first cataract region. From this point for a distance of nearly one thousand miles the river is navigable. It is said that on the Upper Congo there are navigable water-ways extending for 14,000 miles.

The Union of South Africa

I

AFRICA differs from all the other continents in having scarcely any independent countries within its bounds. With the exception of Abyssinia, almost the whole of Africa is ruled by European nations—Britain, France, Germany, Italy, Portugal, Spain, and Belgium.



CAPE TOWN AND TABLE MOUNTAIN, FROM THE BAY.

The first European power to establish itself in Africa was Portugal, which still maintains possessions on the south-east and south-west coasts. Next to Portugal, Britain has been longest in the field. She gained a footing at the Cape of Good Hope as far back as 1806, and she was followed by France, who conquered Algeria twenty-four years later. Britain and

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France are the predominant powers in Africa. France, as far as area goes, has fared best, for her sphere of influence covers nearly a third of the continent. Britain's share, including Egypt and the Sudan, is nearly as great, and exceeds three million square miles. Then follow Germany and Belgium, each with half that extent of territory.

The parts of Africa most suitable for habitation by white men are chiefly in the possession of Britain, and extend from the Cape of Good Hope to the banks of the Zambezi. There



CAPE TOWN.

we find one of the four free peoples of Greater Britain, with laws and institutions similar to our own.

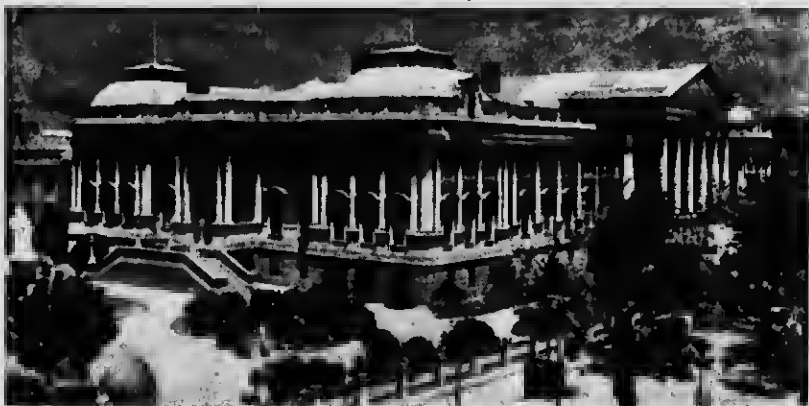
In our study of the countries of Africa we naturally begin with the Cape of Good Hope, the oldest British possession on the continent. It was founded by the Dutch, and most of the inhabitants are of Dutch descent. It became a British possession in 1806, and is the mother-state of the four British provinces which now form the Union of South Africa. The centre from which the colony arose is the Cape Peninsula, at the southwestern corner, where Cape Town looks out upon Table Bay.

The coast is strangely inhospitable; its harbours are few and unprotected, and its river-mouths are blocked by sand-bars.

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About one hundred and fifty miles inland, and parallel with the southern and eastern coasts of the province, runs a lofty mountain region, which forms the main watershed of the country. To the north of these heights the land slopes westwards, and in the rainy season many streams bear their tribute of waters to the Orange River. Between the sea and the main chain are two minor ranges, which mark off the province into a series of terraces.

South Africa is well favoured in the matter of climate. The atmosphere of the Karroo, or inland plains, is dry, clear, and bracing. The north-west of the colony is almost rainless ;



PARLIAMENT BUILDINGS, CAPE TOWN.

the south-west has abundant winter rains, and the south coast has rain throughout the year. In the interior the air is so dry that the wheels of wagons are apt to fall to pieces unless the tyres are frequently tightened. Sudden and violent thunderstorms often occur, and the wind frequently whirls up clouds of dust.

When we step ashore from our ocean steamship on the breakwater at Cape Town, we find ourselves in one of the most beautifully placed cities in the world. Above it towers Table Mountain, often covered with a white cloud, as though its table-cloth were spread. Two peaks flank the mountain, the one on the right being known from its shape as the Lion's Head.

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Cape Town itself has a history extending over two hundred and fifty years, but we see little in the place to remind us that it has attained so respectable an age. There are broad, straight streets and fine public buildings. In several of the streets old-fashioned Dutch mansions with flat roofs and whitewashed fronts may still be seen. As we stroll down Adderley Street, formerly known in Dutch as "the gentleman's walk," we are struck with the motley character of the inhabitants. British, Dutch, Kafirs, Hottentots, and Malay coolies are passing up and down, and the languages we hear spoken are as varied as the types of people we see. Many use the guttural Dutch tongue, and in the South African Parliament a member may speak that language, if he prefers it.

In order to see something of this British Dominion, let us make a journey by rail from Cape Town northwards to Kimberley. We board the train at Adderley Street Station. After passing through the suburbs, we cross the sandy flat that connects the Cape Peninsula with the mainland, and presently we find ourselves amidst wheat-fields. We soon arrive at a junction, from which a loop-line runs to the quaint Dutch settlement of Stellenbosch, a sleepy little town with splendid avenues of oak-trees shading the streets.

The train runs on towards Paarl, a straggling settlement on the banks of the Berg River. The granite for the Cape Town public buildings was quarried on the mountains to the west of the town. Their steep slopes are green with the pleasant foliage of vineyards which produce the best wine in South Africa. Our way lies through a succession of such vineyards, past pretty little towns in the midst of fruitful orchards, towards the mountains which form the southern buttress of the Great Karroo. The train pauses at the pleasant town of Worcester, which clusters round a fine double square, and is delightfully green with well-kept trees. By the side of the street we notice row after row of the huge wagons used all over South Africa for *trekking*. These wagons are drawn by teams of from twelve to twenty oxen.

Now the line begins to climb the huge barrier of the Hex River Mountains. The railway is skilfully engineered, and we rise higher and higher, by means of sharp gradients, amidst splendid mountain scenery. At length, when we have attained a height of more than three thousand feet, we run out on the Great Karroo, with its dried-up shrubs and low heathery bush, good enough for the feeding of sheep, but for little else. In summer the Karroo is a desolate, arid plain. When the rains come, "bush and scrub, apparently devoid of life, shoot out a fresh and vernal verdure; starry flowers spring forth in profusion; fragrant grasses and herbs emerge as if by magic from the soil; and the whole surface of the Karroo appears one immense ocean of dark green, spangled with flowers most brilliant and innumerable."

We occasionally pass sheep farms, which come as a relief to the monotonous plains. Except along the banks of the dry gullies there are no trees, the Karroo being covered with short bushes seldom more than two feet high. The air is intensely dry, and we are not surprised to learn that the rainfall is only three inches in the year. The sheep farmer has a hard time of it in the Karroo. He spends large sums of money in making dams and sinking artesian wells. While there is water in his spring or *fontein*, all is well. When that gives out, and a severe drought comes, he may lose a fortune in a few weeks. The sheep are kept in the open air all through the year, but at night-time are sheltered from the wind in stone kraals.

Now our train runs into Beaufort West, a great wool centre, with a large cattle and sheep market. It is a picturesque place, and much resorted to by invalids. Although the soil in the neighbourhood is exceedingly rich, the scanty rainfall makes agriculture impossible without irrigation. We leave the town and pass between the Nieuwveld and Koudeveld ranges, and climb another three thousand feet, amidst rugged, sterile mountains, before we are out on the high veld. On we go past farming and horse-breeding centres, past villages in the midst of sheep-rearing districts, on and on

until we reach De Aar, the junction of the Cape Town and Port Elizabeth railway lines. We are now in that part of the province which was invaded by the Boers or Dutch farmers of the Transvaal and the Orange River republics during the last war.

Presently we rattle across the long bridge spanning the Orange River, and find ourselves in the stretch of country made memorable by the terrible battles fought during the British advance to the Modder River, which lies fifty miles ahead. We pass the battle-fields of Belmont and Gras Pan, and gaze with deep interest on the scene of the great fight which had to be fought before the stream could be crossed. Beyond the river we see the Boer entrenchments at Magersfontein, and recall the terrible slaughter of the Scottish Highland Brigade in the unsuccessful attempt to capture them. The end of our journey is now at hand. We pass Beaconsfield, a suburb of Kimberley, and presently run into the town of diamonds.

The diamond industry of Kimberley has already a history of half a century. In the year 1867 an ostrich-hunter, named O'Reilly, found the children on a Boer farm not far from the Orange River playing with some beautiful pebbles which they had picked up near the river. O'Reilly thought that one of the stones resembled a diamond, and he asked the farmer to allow him to have it examined. It turned out to be a diamond worth 2,500 dollars. The story of this lucky find quickly spread. Europeans and natives began to look for diamonds; and in 1869 a Hottentot found another stone, which realized 60,000 dollars. This diamond is known as the "Star of South Africa." Within four years of the first discovery ten thousand anxious diggers were turning up the earth on the banks of the Vaal River, on the arid, sandy plains near a farm named Dutoitspan, and at a neighbouring spot called after its original owners, De Beers. Some of the eager seekers after wealth came on foot, some on horseback, and some in ox-wagons or in "Cape carts;" and speedily a town sprang up near Dutoitspan, which received the name of Kimberley.

Notwithstanding the improvements that have since been made, Kimberley is not altogether an inviting spot. The town stands more than four thousand feet above sea-level, on a vast rolling veld, fourteen miles away from the Vaal, the nearest river. It has no fine buildings, and has been described as a "shabby, sun-burnt, tin-built town." In summer the heat is excessive, and the dust lies two feet thick in the streets. But Kimberley has its compensations in the boundless veld around, and the clear blue skies above. The De Beers Company employ large numbers of white men, and for their accommodation a model village, known as Kenilworth, has been erected. Comfortable red-brick cottages, each with its trellised porch and flower-garden, stand in the midst of shady trees. At the entrance to the village are a church and a club, and adjoining the latter is an orchard of thirty acres, planted with peach, apricot, apple, pear, and plum trees.

While the Cape of Good Hope supplies most of the diamonds that feed the vanity of the world, she performs a far more useful work in providing the looms of Europe and other countries with large quantities of wool. The greater part of the province is well adapted for the rearing of sheep. As the grass is thin, the sheep-farms are often of very great extent, ranging from 3,000 to 12,000 acres. Most of the wool finds its way to Europe through Port Elizabeth and East London. Large flocks of Cape goats are also reared, especially in the dry Karroo districts. The Angora goat, originally imported from Persia and Kashmir, is bred in large numbers, and produces mohair of great fineness and beautiful lustre.

Scattered over the country from the Zwarte Bergen to the sea are numerous ostrich farms, where these huge birds are bred for the sake of their beautiful feathers. Formerly the only way to secure these highly-prized feathers was to hunt and kill the bird. If this wasteful method had continued, the ostrich would soon have become extinct. About 1857 successful attempts were made to keep the birds in inclosures ;

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and later on the incubator for hatching ostrich eggs was invented. Now the industry has become firmly established, and ostrich feathers are largely exported.

A large ostrich farm is a most interesting sight. It is inclosed by a ring fence of strong wire, and is subdivided into "camps" of different sizes. Some of these camps near the homestead are used for the rearing of young birds hatched in incu-



GROUP OF OSTRICHES ON AN OSTRICH FARM.

bators, and other camps of about twenty-five acres are given up to single pairs of old birds which can be trusted to hatch and rear their own chicks. The rest of the farm is divided into large camps of about two thousand acres, where more than a hundred ostriches can roam at will.

The little chicks in the home camps are tended by Kafirs. It is the duty of these nurses to supply their charges with plenty of chopped lucerne, fine gravel, and nicely-broken

bones. They must see that the young birds are not exposed to cold or wet; and at sunset, or when the first sign of a coming storm is observed, they must march them off to a warm, dry, well-lighted room with a clean, sanded floor. So many jackals and other wild animals are on the lookout for a meal of ostrich, that a man is constantly employed to set traps and lay poison for them.

At the proper season the full-grown ostriches are driven one by one into small pens, where there is no room for them to kick. There the business of plucking is conducted with the greatest care, so as to avoid injuring the birds. Though the black and drab feathers are not pulled out until they are ready to be shed, the white ones are cut off as soon as they arrive at perfection.

The chief agricultural products of the province are wines, grapes, fruit, and all kinds of cereals belonging to temperate climates. The wheat crop is barely sufficient for home requirements, so that there is no margin for export. Indian corn, known as "mealies," is extensively grown. Tobacco is produced, but as yet it is not of the highest quality. Fruits grow luxuriantly; and now that railways thread the interior, and swift ocean steamers are supplied with cold storage chambers, Cape fruits are finding their way to the English markets. The fruit harvest at the Cape comes at the season when the ordinary supply in the northern hemisphere has ceased.

II.

We are next to visit another province of the South African Union—Natal—and our route will be by sea from Cape Town to Durban. The sea is often rough, as the coast faces the stormy Southern Ocean, and there are few harbours. We may stop at East London, a busy port in the east of the Cape of Good Hope. Following the coast from East London, we are struck by its barren and desolate appearance. For seventy or eighty miles

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as we skirt the shore we see nothing but wide sweeps of dry, treeless flats, fringed by bright yellow sand, on which the ground-swell breaks into foam. A little farther on we reach the shores of Pondoland, and find steep and rugged cliffs fronting the sea. Presently these cliffs give way to spreading pasture-lands, relieved by patches of bush and native kraals, each of which looks like a number of beehives set in a circle. Then we reach the southern boundary of the province of Natal, and the character of the country at once changes. Instead of arid levels or grass-clad slopes, the landscape appears a



ZULU KRAAL.

veritable garden, clothed for miles inland with semi-tropical bush, with here and there a glimpse of sugar-fields in the clearings.

Natal lies wedged in between the lofty Drakenberg ridge and the sea. The land rises rapidly from the sea to the mountains, and except for the coast strip there are no plains in the country. The highlands rise higher and higher, until they culminate in the sheer precipitous walls of the Drakenberg Mountains, which lift themselves in stern grandeur to more than 10,000 feet, and are snow-tipped even at mid-summer. The mountain scenery of Natal is extremely fine,

rivalling that of the Rocky Mountains. White peaks, stupendous cliffs, rocky gorges, and grand waterfalls combine to make this part of the province one of the most picturesque corners of the world. Amongst the numerous rivers of Natal, the most important is the Tugela or the "Surprise" river, so called because of the sudden floods to which it is liable.

Natal has been called the "Garden of South Africa," and well does it deserve the name. On the low-lying coast lands, tropical products, such as coffee, sugar, rice, cotton, bananas, and pine-apples grow luxuriantly. Ascending the plateau to the "midlands," we find a delightful climate, where "on



DURBAN.

five days a week, during every month of the year, both winter and summer, afternoon tea may be taken out of doors." In this part of Natal there are smiling homesteads, orchards, well-tilled fields hedged with acacia, bearing crops like those at home. Trees flourish splendidly. Higher up still we come to the stock-farming district, with splendid pasture for sheep and cattle. The air in these upland parts is delightfully breezy and bracing. The thunderstorms and hailstorms of Natal are a drawback to the splendid climate during the summer season. They come suddenly, giving no signs of their approach; and when they have passed they often leave a well-marked track of destruction behind.

Natal is fortunate in possessing large stores of good coal.

There are some dozen collieries in all, and the chief supplies are drawn from the Dundee coal-field, in the north-west of Natal. There are also iron-mines and marble quarries, and rich gold-reefs are said to exist in Zululand. The future of Natal, both agriculturally and industrially, is very bright indeed. The capital, Pietermaritzburg, or Maritzburg as it is usually called is a pleasant tree-shaded town, built chiefly of red brick, standing in a healthy and beautiful situation some fifty miles from Durban, the port. Durban, the sea-port of Natal, is the largest town in the province, and a place of great commercial importance. Its harbour has been deepened and improved at great expense, and the large ocean steamers can



PIETERMARITZBURG.

now come into the inner harbour. Durban is the most beautiful town in South Africa, and a delightful place of residence. Berea, its principal suburb, is built on a range of hills behind the town, and is literally embosomed in trees.

Natal was the first part of South Africa to introduce the "iron horse," and now, in spite of the broken character of the country, it is well equipped with railways. The engineers who constructed the lines had many difficulties to encounter. The station at Charlestown, on the frontier of the Transvaal, is nearly a mile higher than that of Durban, from which the train starts. The scenery along this line is charming, and the names of many of the stations are very famous from their connection with the events of the Boer war.

The population of Natal is extremely mixed. The British outnumber the Dutch, but there are fourteen black men to every white man. Seventeen thousand of these black men are Hindu coolies, who were first introduced to work in the sugar plantations. These Indians now do most of the market-gardening and the menial work of the province; and as they labour for a very low wage, the poor white man does not regard them with friendly feelings. The great bulk of the population, however, consists of Zulus, who grow mealies and tend cattle, and live in a state of semi-savagery. Though once the terror of South Africa, they are now quiet and peaceable.

III

The two remaining provinces of the South African Union, the Orange Free State and the Transvaal, occupy a considerable portion of the South African table-land. Previous to the Boer war of 1899 these formed two, independent republics, founded by Dutch farmers who had left Cape Colony soon after it became a British possession. The Orange Free State lies between the Orange and the Vaal River, and consists of a gently-undulating country, with isolated, flat-topped hills, known as *kopjes*. Except along the banks of the Caledon River, where the lofty mountains of Basutoland afford many fine views, the scenery is monotonous and dreary. The wide, treeless plains are brown and parched during the greater part of the year, but in the early summer months of November and December the thirsty veld receives showers of rain, and a green, refreshing verdure springs up everywhere. The Orange River, which gives its name to the province, is much obstructed by rapids and cataracts. Lack of water in the dry season and impetuous floods in the wet season render it quite unnavigable.

The Orange Free State is a pastoral country, with wide grazing grounds for sheep and cattle. Agriculture is almost entirely confined to a strip of land along the right bank of the Caledon River. A little gold is exported, some coal is mined, and several diamond-mines are worked; but there

are no manufactures, and practically the only occupation of the people is stock-farming. The natives form the bulk of the population, and about four fifths of the white people are Boers, speaking their own *Taal*, or dialect of Dutch. The only town worthy of the name is Bloemfontein, in the centre of the province. It is a quiet, healthy place, with several substantial buildings. The trunk railway line from Cape Town to Johannesburg and Pretoria runs through the province from south to north.

The Transvaal—which, as its name implies, lies beyond the Vaal—extends northwards to the river Limpopo, and is cut off from the Indian Ocean by Portuguese East Africa. Its surface is part of the great South African plateau, and is covered for the most part with grass of scanty growth, thorny trees, and low shrubs. The Drakenberg Mountains are continued into the Transvaal in a long ridge which runs north and south. The northern parts of the country, and a strip along the eastern border, are low, marshy, and well wooded, and form the "bush veld," so called to distinguish it from the "high veld" or elevated grassy plateau. In the bush veld the grass is tall and rank, and the thick woods give shelter to many wild animals. Along the Portuguese frontier the elephant, rhinoceros, buffalo, and antelope are still to be found. The lion is rare, but not yet extinct, and leopards are common. There are crocodiles in all the rivers, and the hippopotamus still makes his lair on the banks of the Limpopo. The lower parts of the bush veld are infested by the tsetse-fly, the bite of which is fatal to horses and cattle.

The only occupation of the Boers is sheep and cattle farming. As the grass is thin, the farms are of great size; and it is the custom of many farmers to drive their herds in winter to the bush veld, and to bring them back in summer, when the rains have clothed the high veld with fresh grass. The Boers are a primitive people. The older men have little sympathy with modern progress, and are quite content to live as their fathers lived before them. They are remarkable for courage, sobriety, and love of freedom. Most

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of them are strong and well built, excellent riders, and good marksmen. If gold had not been discovered in the Transvaal, the Boers would have gone on tending their flocks, growing their mealies, and hunting the springbok, almost unknown to the civilized world.

The marvellously rich gold-bearing reefs of the Witwatersrand, or "the Rand," were discovered in 1885. This gold-field stretches along the northern rim of a long rocky ridge, thirty-five miles south of Pretoria. The rock consists chiefly of fragments of quartz containing gold and embedded in sand-



PRETORIA.

stone. It is known as *banket*. As the reefs containing the gold-bearing rock dip down towards the south, shafts have been sunk to follow them. From the shafts tunnels traverse the reefs, and in the tunnels the miners work. The rock is sent up to the surface, where it is washed, and then crushed fine in a stamp battery. An immense amount of rock has to be crushed to obtain a small amount of gold; in order to get a cubic inch of gold, no less than a million cubic inches of rock have to be pulverized.

Pretoria, the capital of the Transvaal, contains the offices of the Union Government. It is a hill-girt town, with "red and

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white houses, tall clumps of trees, and pink lines of blooming rose-hedges." The largest town, however, is Johannesburg, which has grown up like a mushroom on the Rand. In 1886 it consisted of a number of rough shanties; now it is a large and handsome place, with all the resources of a great modern city. Some of the mines are in Johannesburg itself, others are on the neighbouring hillsides, and everywhere one sees



JOHANNESBURG AND THE GOLD-MINES.

chimney-stacks and the head-gear of mining shafts, and hears the thud of the batteries that night and day crush the gold-bearing rock.

Rhodesia.

We have next to glance at a vast region which is not yet included in the Union of South Africa, although it forms part of the British Empire. It stretches northwards into the heart of Africa for more than a thousand miles, and has an area double that of the province of Ontario. North of the Cape of Good Hope is the wide, sparsely-populated Bechuanaland Protectorate, which comprises the territories of several enlightened native chiefs. Most of the natives live in large villages near the rivers, and their wealth consists in their herds of cattle.

North of the Bechuanaland Protectorate and the Transvaal

is a mighty region, stretching away to the Zambezi and beyond it. This vast tract of country has been called Rhodesia, out of compliment to Cecil Rhodes, who was chiefly instrumental in securing it for Britain. Southern Rhodesia, which comprises Matabeleland and Mashonaland, consists mainly of a high table-land forming the watershed between the Zambezi and the Limpopo. On the broad back of this elevated region the climate is fine and bracing, and especially suited to Europeans. Much of the soil is fertile, but there are wide spaces of sandy, waterless land. The whole country lies within the tropics, and in the hot, low grounds near the two great rivers tropical vegetation grows luxuriantly. It is a land of promise, not as yet thoroughly explored, but already proved to be rich in gold, silver, and other metals.

The civilized history of Rhodesia only began in the year 1888, when the British South Africa Company was formed to work its mines and develop its resources. It was then discovered that hundreds, perhaps thousands, of years earlier, mines had been worked there by people who must have been civilized. Those who have studied the matter believe that those ancient workings may be the long-lost mines from which King Solomon obtained his stores of gold.

Rhodesia has not as yet advanced very rapidly. Its career has been much checked by native wars. Bulawayo, but lately the kraal of a warlike native chief, has now become a British town, with a mayor and a corporation, daily and weekly newspapers, clubs, a racecourse, a park, public buildings, and all the marks of civilized life. It is connected by rail with Cape Town, and also with Beira on the Indian Ocean.

Some twenty miles south-east of Bulawayo are the Matoppo Hills, which have been described as "a great sea of billowy granite." They are extremely picturesque, and are covered with granite boulders of all shapes and sizes. In a rock tomb on these hills, at a place called World's View, lie the remains of Cecil John Rhodes, founder of Rhodesia.

Rhodesia is likely to prove a good field for white settlers, though at present the life of a farmer is anything but free

from care. His promising field of forage may be swept off in an hour by locusts, his herds may be ravaged by lions, or his native labourers may suddenly disappear just when he has the greatest need for their services. Still, hardy, persevering men with a little capital are likely to do well.

The railway to Bulawayo runs northwards from Kimberley, through a strip of Bechuanaland territory, which has been assigned to the South Africa Company. The chief town in



VICTORIA BRIDGE OVER THE ZAMBEZI.

this strip is Mafeking, which held out so long and so gallantly in the Boer war. After passing Bulawayo, the railway bends westwards, and crosses the Zambezi at the gorge immediately in front of the famous Victoria Falls. The steel bridge which carries the railway is the highest in the world, being 380 feet above the level of the river. We can make the journey from Cape Town to the Zambezi, a distance of 1,640 miles, in a comfortable train with all the luxuries of sleeping-car and dining saloon. It is hard to realize that, within the memory of people

who have not yet passed middle age, this region was almost unexplored, and the traveller took his life in his hands when he approached it.

The building of the Victoria bridge marked an important stage in the great "Cape to Cairo" Railway, which was the dream of Cecil Rhodes. The whole distance to be traversed by this line is about 5,700 miles. Of this, some 2,000 miles northwards from Cape Town have already been constructed, while about 1,500 miles are open from Cairo southwards. More than half the continent has thus been spanned, the line being built throughout on territory either belonging to the Empire or under its control. There is yet, however, a wide gap in the centre, which can be closed only by the co-operation of other European nations. In the meantime a telegraph line has already been erected from Rhodesia into German East Africa, and will shortly connect the system of South Africa with that of British East Africa and with the Sudanese and Egyptian lines.

Telegraph construction in tropical Africa presents many difficulties of its own, apart from the task of transporting all the material by means of native porters only. The elephants in some districts find the iron poles convenient as rubbing-posts, a use for which they are not adapted. Upon one occasion a European telegraphist was kept a prisoner for nearly a week in one of the testing-huts by a lion. All this time the animal watched patiently a few yards from the door, and the man, who was without ammunition, was forced to telegraph for assistance and wait indoors until he was relieved. But the value of the line, connecting so many scattered settlements of white men, has already been amply proved.

North of the River Zambezi, and stretching to the shores of Lake Tanganyika, is a continuation of British territory which includes Northern Rhodesia on the west and Nyasaland Protectorate on the east. It is a vast plateau, flanked on the east by Lake Nyasa, and pitted by numerous other great sheets of water, the most important being Lakes Bangweolo and Mweru. The whole of this area is covered with abundant vegetation, which in places reaches tropical luxuriance. The vast forests

yield palm oil, rubber, and drugs; and troops of antelopes, elephants, and rhinoceroses roam over the country at will. Gold, iron, coal, and copper have been discovered, but as yet they are unworked. In 1876 Scottish planters introduced the coffee tree, and for a time coffee furnished the chief export trade. The planters, however, consider that the future of their country is bound up with cotton rather than with coffee, and they have begun to produce cotton of a very high quality. Tobacco and rice are also important products.

Before the British took over the administration of this country, it was fearfully ravaged by slave-traders. Now British gunboats on the rivers and lakes, and Sikh police among the towns and villages, keep watch and ward over the lives and safety of the inhabitants. Missionary enterprise is very active in the Protectorate, and industrial schools have been established in many places. The largest settlement is in the Shiré highlands, at Blantyre, and is so called after the Scottish village in which Livingstone, the great explorer of this region, was born.

German, Portuguese, and French Territories

I

THE provinces of the South African Union and the British territory of Rhodesia stretch northwards like a wedge into the heart of Africa. On either side are lands which are ruled by other European nations, and these we must glance at before we leave South Africa. North of the Orange River and fronting the Atlantic for more than 800 miles is the district known as German South-West Africa. On all that coast there is only one good harbour, Walvis Bay, and that, together with some 400 square miles of land round about it, belongs to the German Empire. German South-West Africa is a great table-land, part of the Kalahari plateau.

A desert belt extends along the coast, but as the ground rises towards the mountain ridge it passes into a region of open mimosa scrub. The mountains and the Kalahari plateau beyond form a fine grazing region, where the natives keep large herds of cattle. Parts of the north are suitable for farming, and have been settled by a number of Boers from the Transvaal. There is supposed to be considerable mineral wealth in the country, but mining has not yet been largely developed. Little progress, indeed, has been made in any direction in this German colony, and it is doubtful whether it will ever rise to any importance.

North of this German possession lies a vast tract of Portuguese territory named Angola, stretching for some 800 miles along the coast to the mouth of the Congo, and extending an equal distance inland. The coast belt is low-lying, backed by ranges of mountains which run parallel to the shore. Behind these is the African table-land, which reaches in the southern part of this colony an elevation of about five thousand feet. Angola has no future as a white man's country. The fertile northern parts have a climate which is deadly to Europeans, and the southern and upland regions, which are fairly healthy, are barren and unproductive. The only exports are forest products such as vegetable oils, wax, india-rubber, cocoa-nuts, and coffee. The natives are of Bantu stock, some being quite savage and others partly civilized. Among them are found a considerable number of the pigmy or dwarf type.

The chief town of the colony is Loanda, the oldest Portuguese settlement in South Africa, and the principal port on the stretch of coast between Cape Town and the Gulf of Guinea. It stands on a long, low island, inclosing a natural harbour where the largest ships may lie at anchor. Benguela, the port for the central part of the colony, is a more healthy town. In the south is the flourishing sea-port of Mossamedes, which is the only settlement in the whole region worthy of being called a colony. It is a healthy place for Europeans, and has the largest white population of any town between Morocco and the Cape of Good Hope.

II.

Turning now to the east, we see that the British possessions are cut off from the Indian Ocean by another long strip of Portuguese territory. Portuguese East Africa, as it is called, is divided into two parts by the Zambezi. North of this river is the province of Mozambique, and south of it is Gazaland, or the province of Lourenço Marques. Towards the south the low coast-strip is of considerable width, and across it flow several large rivers. The whole area receives a heavy rainfall from the Indian Ocean, and the coasts are everywhere swampy and unhealthy.

The interior of Mozambique is mountainous, and contains in the south-west one of the finest upland regions in Africa. On the slopes are romantic gorges and mountain streams, fertile valleys, and luxuriant vegetation. Here one sees wide-spreading lawns of the softest and greenest of grass, beds of flowering aloes, tall forest trees festooned with climbing plants, and a wealth of rare orchids and ferns. The climate is temperate and healthy. "Nature here seems to have used all her power to make a feast for human eyes." Despite its fertility and great natural resources, the country at present yields little beyond such forest products as oil-seeds, gums, and wax, with some coffee, tobacco, and ivory. Were the colony governed aright and wisely developed, its produce might be increased a hundredfold.

The only Portuguese settlement on the entire coast is Lourenço Marques, on Delagoa Bay. This was formerly a great centre of the abominable and cruel slave-trade, which has been so terrible a curse to Africa. When that trade was prohibited, the port sank into obscurity; but of late years it has greatly revived through becoming the terminus of a railway to the Transvaal. This railway is the shortest route from Pretoria to the sea, and during the late war Lourenço Marques was the only port to which the Boers had access. Under proper management a large volume of traffic should pass over this line, which is the natural outlet for a large area

of British South Africa. Between Delagoa Bay and the Zambezi stands the port of Beira, which is connected by rail with Salisbury and Bulawayo in Rhodesia, and is thus a place of growing importance.

Two hundred and fifty miles off the coast of Mozambique lies one of the largest islands of the world, Madagascar. It is a thousand miles in length, and its area is somewhat greater than that of Ontario. Madagascar is now one of the French possessions in Africa. For more than a thousand years



DELAGOOA BAY.

Madagascar has been known to Arab traders, and according to an old legend it was here that Sindbad the sailor was rescued from the Valley of Diamonds by that wonderful bird, the roc. It is curious to know that men have actually found in the island the fossil remains of a species of bird which stood over ten feet high, and which laid an egg a foot in length, so that the story told in the *Arabian Nights* may not be wholly due to imagination.

In build this island is a copy of Africa on a small scale. The whole interior is an elevated table-land, while round the coast is a belt of low, forest-clad, unhealthy plains. Lying as

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it does in the monsoon area of the Indian Ocean, Madagascar is well watered, and is exceedingly rich in all vegetable products. Rice is the chief crop on the plains, and indigo, hemp, sugar-cane, cotton, tobacco, and coffee grow well. Since the French took possession in 1896, there has been much improvement in the roads, and railways have been begun, but the island is as yet little developed, and is indeed only partly explored.

We must now return to the mainland and continue our survey of the east coast regions. North of Mozambique is a large section of territory which is known as German East Africa. Its western boundary is Lake Tanganyika, and on the north it meets British East Africa. The coast-strip is flat and unhealthy, with a dense tropical growth of vegetation and mangrove swamps at the river mouths. Behind this rises an irregular line of mountains, forming the outer buttress of a dry and barren plateau from three to four thousand feet high. Large parts of this plateau are entirely desert or scantily scrub-covered; more than three fourths of the area is said by German explorers to be of little or no value.

On the northern frontier rises Kilimanjaro, the loftiest mountain in the African continent, the higher of its twin volcanic summits reaching to 19,700 feet. Its top is covered with perpetual snow, but as the natives who live at its base have no knowledge of what snow is, they suppose it to be covered with silver, and it is said that some of them have even attempted to scale the mountain in search of the precious metal.

The natives are mostly of the Bantu race, and have some knowledge of trade and of agriculture. The district was formerly notorious for the slave traffic, which was carried on by Arab traders. There are many settlements which may be called towns, chiefly on the coast and on the shores of the great inland seas on the west. Some of these, under the methodical and somewhat rigid rule of the Germans, have been wonderfully improved of recent years. Wide streets and highways, and pleasant houses and gardens, have taken the

place of the crowded butts and jungle paths of the native. The largest town is Dar-es-Salaam, south of Zanzibar Island. Bagamoyo, a little to the north, has also a number of European residents, and has been the starting-point of many exploring expeditions into the interior.

British East Africa

THIRTY miles off the coast of German East Africa is the large coral island of Zanzibar, or "the land of the black," which since 1890 has been under British protection. The island is very fertile, and is clothed with a rich tropical vegetation. The most important commercial product of Zanzibar, and also of the sister island of Pemba, which lies forty miles to the north, is cloves. More than a million pounds weight of this spice have been exported in a year, most of it going to London. Now that slavery has been abolished, the clove growers of these islands find considerable difficulty in securing sufficient labour to work their plantations.

Zanzibar is valuable to us because its chief town is the principal commercial centre of Equatorial Africa. The town of Zanzibar stands on a bay on the landward side of the island, and its anchorage is always crowded with shipping. Amidst the swarm of British, German, Italian, and Portuguese merchant vessels we may see many curiously-rigged Arab dhows. Zanzibar is a very oriental-looking town. High above the square, whitewashed houses, with their smooth walls, flat roofs, and unglazed windows, stands the quaint tower of the palace, still occupied by the sultan, who is the nominal ruler of the island and of the coast belt of British East Africa.

For centuries Zanzibar was one of the great slave-markets of the world. Some five or six thousand wretched slaves were imported annually in dhows from the mainland, and were then, when opportunity offered, exported to a life of bondage in

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Turkey, Arabia, or Persia. No doubt many of the Arab traders in the streets of Zanzibar are still engaged secretly in the infamous traffic, and are perhaps sighing for the old days when their dealings in "black ivory" were open and unchecked. The site of the slave-market is now occupied by a Christian cathedral.

Northwards from German East Africa the coast line for four hundred miles is British. The territory of British



ZANZIBAR.

East Africa stretches from the coast to the headwaters of the Nile, and its general configuration resembles the German territory which we have just described. While the coast region is tropical and unhealthy, much of the inland plateau is admirably adapted for European settlement, and large numbers of well-to-do farmers have taken up ranches on these grass-clad uplands, where the equatorial climate is tempered by an elevation of some six thousand feet. To the north of the Victoria Nyanza, where the elevation is lower,

the climate is less favourable to Europeans, though not extremely unhealthy. This part is known as the Uganda Protectorate.

British East Africa is by far the most progressive part of the continent that we have visited since leaving British territory in the south, and its progress is largely due to the Uganda Railway. This railway runs from Mombasa to Port Florence on the Victoria Nyanza, and does not really touch Uganda at all. By means of this line, and thanks to the establishment of peace and good order under British rule, we may now spend a pleasant and comfortable holiday travelling or hunting in lands which but a few years ago no white man could reach except at the cost of weary months of struggle through jungle, swamps, and deserts, exposed to the attacks of savage beasts and still more savage men.

We approach the port of Mombasa from the sea by a narrow gap in the cliff wall, and, picking our way past jagged reefs of coral, enter a deep, sheltered bay which is almost entirely filled by the island of Mombasa. The native town has a population of some 30,000, including many British Indian subjects; that of the European quarter is about 100.

Everywhere along the roads of the European town and the wider streets of the other we see rails laid down, but there are no street cars. The rails are for the street-trolley, which is the usual private conveyance in Mombasa. It holds four persons, and is pushed by native coolies. These lines converge on the railway station, for the Uganda railway begins on the island of Mombasa, and is carried over a narrow arm of the bay by a fine steel bridge. The railway does not much impress us at first. The width of gauge is only one metre, or 39 inches. The carriages are of the pattern we have already seen in India and in the South African provinces, with windows well protected from the tropical sun. The engine looks more homelike, with its "cow-catcher" in front, and was probably built by an American company.

We have been warned to take a supply of comfortable rugs

with us, but it seems as if they would be little needed on this journey. For the first few hours the heat is almost unbearable. Our cooling drinks are soon exhausted and we are glad to quench our thirst with the cocoanut milk which the natives sell at the stations. It is an entirely tropical landscape which we see around us. Tall cocoanut palms border the track, and under their shade we notice the huts of the native Swahili amid their patches of garden ground. The people watch our train with the eager joy of children. The women are dressed



RAILWAY BRIDGE BETWEEN MOMBASA AND THE MAINLAND.

in bright colours, while the men wear either long robes of white or merely a cloth round the waist. A few very wealthy or very fashionable ladies shelter themselves under an umbrella.

Soon we pass through the low plain and reach the first step of the gradual rise to the inner plateau. The tropical forest disappears, and we come upon what was for ages a great barrier to trade and to travel—a wide belt of waterless desert. Even the scattered stunted bushes are left behind, and only the red dusty soil is seen. We shut every

window and door, but a fine red dust fills the air, pours in through every crack and crevice, and powders our clothing to the colour of burnt brick, and as we feel the perspiration trickling down our face we shudder to think of what our mirror will shortly reveal to us.

This desert, so fatal to travellers in former times, is soon crossed by the train, and we rise to a still higher level, where grass and bushes again appear. We are entering upon the true plateau region, with its fertile rolling savannas, where the days are not oppressively hot and the nights are always cool. There is no summer or winter; we are too near the equator for that. But there are two rainy seasons and two dry seasons every year, which give some variety to the course of the months.

We are now approaching the country of the Masai, one of the most active and warlike tribes of Africa. Masailand was, until recently, a barrier to exploration more formidable than the desert behind us; and though the Arab slave-traders often forced a passage to the coast with their gangs of miserable captives from the interior, many a caravan was wiped out on the march by the terrible Masai warriors. But those days are gone, and we may now cross Masailand as safely as if it were one of our own prairie provinces. The air becomes fresher and cooler as we advance, until we realize that those rugs of ours will not be useless after all. In their comfortable sleeping-cars the railway company supplies the mattress alone, and we must depend upon our own stores for bedding, and so, as we roll ourselves up for a night's rest, we feel grateful to those who had given us advice in this matter.

We rise at dawn to find ourselves in fairyland. Groups and flocks of animals are seen feeding quietly on the plains and slopes around, but they are not such animals we have ever seen before unless in picture-books or wild-beast shows. Graceful antelopes of various kinds gaze at us, and our heart beats faster to see the quaintly striped zebras cantering out of our way. At last our eye catches the ungainly form of a giraffe, stretching towards us a neck which seems to have

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lengthened with the intensity of his gaze. In some places the troops of big game of various kinds are literally innumerable, and we are reminded of our own prairies in the days when the bison was lord of the West.

But here, as there, the big game animals are doomed. They and white settlers cannot live together. The zebra is specially marked for extinction by the ranchers. A troop of galloping zebras make short work of a wire fence, barbed though it be; and when they leave an inclosure they do not trouble to look for the gap by which they entered. Broken fences mean a serious loss when ostriches are the stock of the farmer, and we cannot wonder that he sets out with his rifle for other ends than mere sport.

Near the water-courses the buffalo and the huge rhinoceros have their homes. The latter is a very unwelcome visitor when he ventures near a homestead and leaves the garden a mangled waste. Dim of sight but quick of scent and also quick of temper, he has even been known to charge a railway train on the line. The only result to the train was a damaged foot-board: whatever the plucky rhinoceros may have felt after the encounter he was no doubt entirely content to see that even this strange monster ran away without waiting a second charge.

Beasts of prey are also abundant, especially lions, but they do not show themselves as we pass. Everywhere, however, we hear lion stories, both old and new. At one point in the construction of this line, work was almost stopped by the nightly attacks of lions upon the Indian coolies and native labourers in the construction camp. Some twenty had been killed, despite all precautions, and the others were panic-stricken; work was resumed only after the camp had been removed to a more open site several miles distant. Even after the line was opened, a wayside station would sometimes be infested by lions so that no one would dare to approach it. A party of three Europeans went to rid a certain station of those enemies, and as evening fell they retired to their sleeping-car, and sat watching by the open window. As the

hours passed they all fell asleep, when the lion suddenly sprang in at the open window and seized and killed one of the party before the others were fully awake, making his escape as he had entered.

Despite the need for killing many of the wild animals of these regions, it would be a calamity if they should become quite extinct; and attempts are being made in East Africa, as they are in Canada, to preserve the natural wild life of the country in certain areas. Near Nairobi there is a game preserve larger than the province of New Brunswick, where no shooting is allowed except in self-defence, and no skins or heads of animals may be taken away. This is the most wonderful zoological garden in the world, both for its extent and for the variety of animals which it contains. So tame are many of them that the traveller who is armed with a camera may carry off in abundance the spoils of his chase in the shape of snapshots of wild animals at home.

But our train is still advancing, and we stop to breakfast at a neatly kept station, under the charge of a "babu," that is, a native of India who has received an English education. By noon we are at Nairobi, the chief town of this plateau region, and the capital of the protectorate. It is an active and growing town, with some 14,000 inhabitants. There are over seven hundred Europeans, whose residences give an air of some dignity to the place.

Soon after leaving Nairobi we come upon one of the world's wonders—the great rift valley. For hundreds of miles from north to south the plateau is crossed by a huge natural ditch, not scooped out by water like our western river-beds, but formed by the cracking of the earth's solid crust, and the sinking down bodily of a long strip of rock. In front of us this rift shows as a flat-bottomed valley forty miles wide and two thousand feet below the level of the plain on which we stand. The escarpment on either side is very steep, and the train crawls diagonally down the slope. Down the steep gradients, on notches cut in the cliff, and over lofty steel bridges spanning chasms and canyons, we make our way cautiously. Then on

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again over the wooded lower plain, with its chain of lakes and water-courses, and once more a similar series of gradients lies before us, to be climbed carefully by our heavy engine, none too heavy for the work it has here to do.

Beyond this rift valley we are again on the plateau. Here it rises in a distinct mountain ridge, which we cross at an



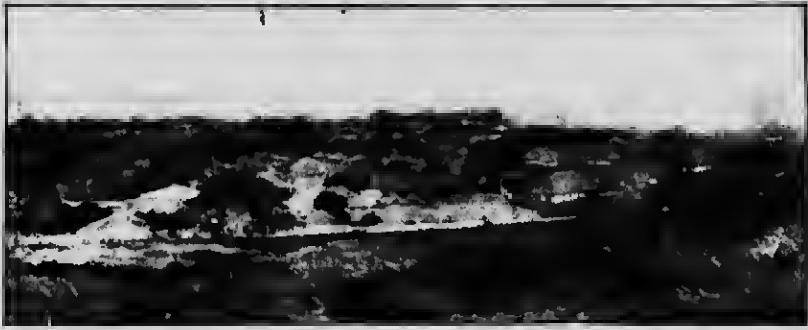
IN THE GREAT RIFT VALLEY.

elevation of over 8,000 feet. The descent beyond this is very rapid, and soon the air becomes mild and even hot, with a tropical dampness very different from the air of the plateau. Finally we reach the shores of the Victoria Nyanza at Port Florence, only 2,000 feet above the sea, and gaze upon the great reservoir of the Nile which men sought for so long and with so much hardship.

Victoria Nyanza is, as we have said, almost equal in size

to Lake Superior. We sail out of the bay where the hot and uninteresting town of Port Florence stands, and the wide lake stretches out before us like the open sea. We make the circuit of the south end of the lake, calling at native towns by the way, and we are impressed by the neatness and regularity of those that are in German territory. The khaki-clad soldier is much seen, for German rule has more of the military element in it than that of Britain.

Turning northwards we sail along the western shore towards Entebbe, the capital of Uganda, and our eyes are pleased with the rich forest-clad slopes and grassy meadows that border the lake, and the wooded islands that fringe its



ENTEBBE.

shore. But no sign of human life greets us ; the land is empty as though swept by a plague. And a plague-stricken land indeed it is, for here the terrible "sleeping sickness" has smitten hut and hamlet. When the disease falls upon a man he has no longer the strength or the will to strive ; he cannot keep awake, and cannot sleep in peace ; no remedy can cure him, and soon he falls into the deeper sleep of death.

The germs of this plague are carried by a fly, and when these germs reach the blood of a man through the bite of an infected fly, the man is hopelessly poisoned. After much careful study the doctors found this out, and they also found that the fly cannot live except in shady places close to a lake or a river. So the government of Uganda has removed all

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the natives from these shores, and sent them to live on the uplands, where the dreaded fly cannot come. Thousands of victims have fallen before this plague, however, and the struggle is not yet over, nor has any cure for the disease been discovered.

The people of Uganda—the Baganda, as they are called—are of a very superior type to most African peoples, but they form less than one fifth of the whole population of the Protectorate. They had a fairly well-developed civilization of their own before the coming of the white man, and a form of government not unlike that of European peoples under what we call the feudal system. A great deal of power is still left in the hands of the native king and his chiefs, and the British officials merely insist on order and obedience to law, and help in the development of the country.

There are only about four hundred Europeans among three and a half millions of natives, but so much progress has been already made that Uganda is now in connection with the telegraphs and telephones which extend up the Nile from Egypt, and a regular postal system is established, with a parcel post and a money order service. Most of the region is very fertile, and produces cotton and india-rubber, while the growing of coffee, sugar-cane, and cocoa is being attempted. Christian missions have been established for many years, and some fifty thousand native children now attend the mission schools. There is no part of the “Dark Continent” which is more interesting or has been more written about in recent times than British East Africa.

Abyssinia and Somaliland

WHEN we reach Uganda we are within the basin of the Nile. We shall not extend our survey to that river for the present, but leave its interesting valley to a later chapter. Before leaving the east coast of the continent we must glance

at the extreme eastern angle, occupied by the region of Somaliland and the ancient kingdom of Abyssinia. Abyssinia contains the rampart of mountains which forms the south-eastern boundary of the Nile Basin, and the greater part of the kingdom drains towards that river. The history of Abyssinia goes back to the days of King Solomon and the Queen of Sheba ; it was the home of wonders in the Middle Ages, and it remains to-day the only native Christian state of Africa. Its Christianity, which is akin to that of the Greek Church, is marked by some very curious practices, such as priestly dances and wild festivals.

Abyssinia has more than once been forced to fight for its independence. In 1869 Italy bought an island and a harbour on the coast of the Red Sea. It soon found a pretext for interfering in the internal affairs of Abyssinia. War followed ; Italy was defeated, and forced to withdraw to a poor little strip of territory on the coast known as Eritrea, from the ancient name of the Red Sea. Here the Italians have the town of Massowa, situated on a small coral island joined to the mainland.

Abyssinia has been called the African Switzerland, because, like that country, it has no sea-coast, it is very mountainous, and is the birthplace of several large rivers. It chiefly consists of a lofty and very rugged table-land, rising abruptly from the hot, arid coast plain of the Red Sea. Westward the table-land slopes more gradually to the basin of the Nile. Deep and precipitous canyons divide the table-land into numerous smaller table-lands, from which rise snow-capped volcanic peaks and flat-topped hills. There is every variety of climate in Abyssinia, from the burning heat of the lowlands to the icy cold of the barren mountain summits ; and there is a corresponding variety in its productions.

The Abyssinians are a very mixed race, the more civilized of the highlanders being of middle height, broad-shouldered, and shapely, with high foreheads, straight noses, thick lips, and almost woolly hair. They are intelligent, polite, and naturally gay ; but they are also vain, selfish, and cruel.

The emperor is a despot, who rejoices in the title, "King of the kings of Ethiopia, Conquering Lion of Judah." He resides at Adis Abbeba, which is rather a settlement than a town, as it consists of huts and houses scattered over an area of some fifty square miles. Some years ago he abandoned his former capital because all the wood in the neighbourhood had been exhausted for building and fuel. Adis Abbeba consists of wide stretches of turf, broken by deep ravines, and studded here and there with summer-houses and booth-like tents. There are no streets, and to go from one part of the town to another we must mount our mule and ride across country. The capital is connected with some of the chief towns by telephone, a mode of communication which is highly popular in Abyssinia.

Abyssinia sinks in the south to Gallaland, to the east of which is the "horn of Africa," or Somaliland, terminating in Cape Guardafui. The natives of the interior are a half-civilized pastoral people, with large herds of camels, sheep, and horses; the Somalis of the coast are traders, sailors, and fishermen.

Most of Somaliland is gray steppe land, strewn with boulders, and dotted with parched, stunted vegetation armed with thorns and prickles. A traveller thus describes it:—"You are in a sea of gray. The fierce sun beats down upon you from a blue-gray sky; as you pass, gray shrubs nod at you, and livid gray lizards shiver away over the gray sand; gray jackals eye you suspiciously from behind huge gray ant-hills; gray bones and skulls strew the beaten track." Somaliland is a paradise for the big-game hunter. Most of the knowledge we have of this region comes from Britons who have traversed it in pursuit of lions, elephants, and antelopes.

Britain, France, and Italy have divided the coast regions of Somaliland among them. The British sphere fronts the Gulf of Aden, and has its centre of government at Berbera, which consists merely of a number of thatched huts and white-washed houses on a sandy plain. The Italian sphere lies south of the British; and the French protectorate, which is by far the smallest of the three, boasts of the town of Jibutil,

which is likely to grow in importance, as it is the terminus of a railway now being constructed through Harrar, in the south of Abyssinia, to Adis Abbeba.

The Congo

WE have next to examine briefly that part of Central Africa which lies to the west of the areas we have been visiting, between the head-waters of the Nile and the Gulf of Guinea. This part of the central plateau forms the basin of the great River Congo; it slopes towards the Atlantic, and is lower than the high eastern plateau with which we have been dealing. The central part forms a state which is under the control of Belgium, and is known as Belgian Congo, and the coast region to the north of the river is French territory.

The greater part of Belgian Congo consists of a somewhat depressed plain, and having a mountainous border on the east side, through which the river Congo forces its way in many cataracts and rapids. We may roughly divide the Congo basin into two distinct regions—a forest zone, the largest tree-clad area in the world, occupying the whole of the north-east; and an open zone, chiefly of savanna and arable lands, comprising all the rest.

We shall not be surprised at the marvellous profusion of vegetable life in these forests if we remember that the Congo basin has two wet seasons in the year, and that the rays of a tropical sun always beat down upon the land. The trees include ebony, teak, oil-palm, mahogany, and many others producing useful and ornamental woods. Such plants as Indian corn, manioe, millet, tobacco, hemp, and sugar-cane flourish wherever they are planted, and these with the banana, which yields enormous quantities of wholesome food, form the chief crops of the country.

There are more than a hundred different tribes inhabiting

Belgian Congo, mostly of Bantu stock. Many of them are, or have been, cannibals. Tribes of pigmies are to be found inhabiting the dark recesses of the forest. Some of the natives show great skill in smelting copper and iron, which are found in most parts of the state; and the Katanga country in the south-east, near the border of Northern Rhodesia, is so rich in minerals that it must one day become a great mining centre.

Scattered over the state, at convenient points, are government and missionary stations, and the natives are being taught how to farm their lands in the best way, and are in-



LEOPOLDVILLE, A CONGO TOWN.

structed in the useful arts. Progress, of course, is very slow, and the Belgian methods of ruling the country have not always been wise or humane. Nevertheless, we may hope that these stations will in time become the centres from which the blessings of civilization will spread. The great staple of trade is india-rubber, the traffic being almost entirely in Belgian hands.

Belgian Congo can never become a white man's country, for it is notoriously unhealthy, not so much from the tropical heat as from the great amount of moisture in the air. Until we know better how to combat tropical diseases, the Congo basin will only have a few officials, missionaries, and soldiers as its white inhabitants.

French Congo lies on the right bank of the Congo River and its tributary, the Ubangi, and extends northwards in the direction of the Sahara, as far as Lake Chad. Its products are similar to those of Belgian Congo, and French trading centres are dotted over the country, but communication with the coast is rendered difficult by the mountain range which fronts the ocean.

To the north and west of French Congo is a wedge-shaped stretch of territory with a short coast-line, which forms the German colony of Kamerun. The coast is low and unhealthy, but the interior is mountainous, being occupied by the ridge which divides the basin of the Congo from that of the Niger.

Nigeria

A LINE drawn from Lake Chad to the northern angle of the Bight of Biafra divides the German colony of Kamerun from another great stretch of British territory known as Nigeria. This is the largest of our West African territories, and we may take it as a sample of the various colonies, British, French, and German, which compose Upper Guinea, as the north shore of the Gulf of Guinea is called. The district has long been open to European trade, and the names on the map—Grain Coast, Ivory Coast, Gold Coast, and Slave Coast indicate the kinds of trade which have been carried on. The coast regions are very rich and fertile, but hot and unhealthy for Europeans, and one district was formerly known as the "White Man's Grave." The land rises quickly to a height of some two thousand feet, and then slopes gently inland towards the Niger, which sweeps round the plateau eastward, and finally enters the gulf through the low fertile lands in the centre of Nigeria. The higher ground is moderately healthy, and much is being done to improve the condition of the coast towns also.

There are no harbours, and ships must lie off the shore.

and load or unload by means of native boats. The first railway has only recently been opened, in the British Gold Coast colony, running from the sea-coast to the kingdom of Ashanti, where more than one "little war" had to be waged by our troops in recent years. Away from the British settlements there are no roads but merely foot-paths through the dense tropical jungle, and all goods must be carried by native porters or floated along the numerous winding rivers and creeks.

The whole coast is a hot-bed of fever. The Niger delta is one vast mangrove swamp, and the air is heavy with



ACCRA, CAPITAL OF THE GOLD COAST.

the smell of decaying vegetation. Yet even in the coast regions traders manage to exist, and the river mouths are dotted with "factories" or trading stations. Here the white agents and their clerks live their sickly lives, bartering with the native chiefs for the palm oil, palm kernels, india-rubber, kola-nuts, and so forth, which they import from the interior. So largely is palm oil exported from this part of the country that the stations on the delta streams of the Niger are known as the "Oil rivers."

Nigeria includes an immense and not very well-defined portion of the western Sudan, reaching to Lake Chad on the east, and bounded on the north by the French Sahara. It

covers an area estimated at 500,000 square miles, and contains a population of some twenty-five millions. At least four of the Nigerian towns, Kano, Bida, Ilorin, and Yakoba, contain more than 50,000 inhabitants each. Southern Nigeria, as we have said, is low-lying, swampy, and unhealthy, and is inhabited by barbarous tribes sunk in ignorance and superstition; northern Nigeria, on the other hand, is an undulating, dry, and healthy region, peopled chiefly by Mohammedans.

The most intelligent and enterprising of the inhabitants of Nigeria are the Hausas, who are the artisans and merchants



AN "OIL RIVER" STATION.

of the western and central Sudan. They are skilful as blacksmiths, brass-workers, tanners, dyers, and glass-workers. The native police of West Africa are recruited from the Hausa tribes, and there is a useful native army, comprising native infantry, artillery, and engineers, under British officers. The cotton cloths woven by the Hausas at Kano, which they call the centre of the world, are conveyed to all parts of Central Africa. Kano is a city inclosed by a wali, said to be twelve miles long. Within it are red mud houses, and outside well-tilled fields and gardens. It has a famous market, in which one may buy all the products of the country, from ivory to slaves.

French Possessions in North Africa

THE French possessions in Africa are not only of vast extent, including nearly one-third of the continent, but in the north they are very compact, extending across country from the Mediterranean to the Gulf of Guinea and the Congo, and from the Atlantic Ocean to the Sudan. The greater part of the coast-lands, however, are not under French control. The basin of the Upper Niger is included in this great area, and is, like Upper Nigeria, a region of much fertility, with a large native population. Northwards of this extends an almost rainless region of plain and plateau. This is the great desert of the Sahara, which covers an area almost equal to the whole Dominion of Canada.

The true Sahara is covered with shifting sand, stones, or rock, but where water exists oases are formed, and the desert becomes amazingly fertile. It is probable that the Sahara was formerly much more habitable than it is at present, for we may trace many dry water-courses on the parched plains, and there is evidence that the Romans used to cross it with their bullock-carts. There must have been sufficient herbage to support the transport animals during the long journey. Beneath the sand there are in many places stores of underground water, which may be tapped by means of artesian wells. French engineers have been able by this means to make some arid places as fertile as market-gardens.

The chief tree of the Saharan oases is the date-palm, without which the great desert would be uninhabitable. In order to attain its greatest perfection, the palm should have "its feet in the water and its head in the fire." The oases of the Sahara satisfy both conditions. In many places the ground has an upper crust of sulphate of lime, below which there is water-bearing sand. When a grove of palms is planted, this upper crust is removed, and the trees are planted in the sand. The palm provides the Arab with food, drink, timber, and shade. It becomes pro-

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ductive after eight years' growth, and comes to its full fruition in from twenty to twenty-five years. A palm grove, with its heavy golden clusters of hanging dates, is one of the most beautiful sights in the world. The only other vegetation of the desert consists of stunted, withered-looking shrubs, which manage to exist with but little moisture.

The chief domestic animal is the "ship of the desert," the familiar camel. Originally introduced from Arabia, the camel has become indispensable to the Arabs of North Africa. Long strings or caravans of these patient creatures, laden with the manufactures of Europe, or the ostrich feathers, ivory, skins, gold-dust, and dates, which form the staple of the desert trade, travel incredible distances over the moving sands, the long, stony steppes, and the rocky ridges of the Sahara. The caravan guide is looked upon almost as a supernatural being, for he holds life and death in his hands. As the caravan sets out, he is treated with homage; when it returns in safety, he is loaded with thanks. He follows the track by noticing landmarks invisible to ordinary eyes; he knows the exact position of every oasis, and the path along the trackless desert seems plain to him. The caravans follow definite trade routes, which converge upon Tripoli, Algeria, or Morocco. The amount of their trade is, after all, only small, and is likely to grow less and less as the trade of Europe penetrates the interior by way of the Senegal and the Niger, and finally by that railway across the Sahara which French engineers have planned.

North of the Sahara, and bordering on the Mediterranean, is Algeria, the most important colony of France, and, next to British South Africa, the most civilized part of the continent. Inland it shades away indefinitely into the sands of the Sahara. To the west is the crumbling empire of Morocco, where French power is making itself felt; to the east, the French protectorate of Tunis. The backbone of these three countries is formed by the Atlas Mountains, a series of broad ridges and rounded elevations running from the Atlantic coast to Cape Bon. The mountains are loftiest in Morocco; and as they proceed

eastwards into Algeria and Tunis, they branch into two ranges—the Tell Atlas bordering the Mediterranean, and the Saharan Atlas fronting the desert. These ranges divide the country into three well-marked sections. Fringing the Mediterranean is the Tell, a narrow region of undulating, cultivated ground, splendid forests, and fertile valleys. Between the two ranges are the High Plateaus, covered with alfalfa grass and sweet herbs, well suited for rearing sheep and goats. Beyond the Saharan Atlas are the Steppes of the Great Desert.

Algeria is renowned for its lovely winter climate, which attracts many European visitors. When northern days are cold and skies are dull, Algeria revels in unclouded sunshine and delicious heat. One may plan a picnic twelve months ahead in Algeria, and be certain of the weather. But though the visitor thinks the climate all that heart can desire, the farmer finds that the frost sometimes kills his tender crops in a night, or that the fiery breath of the sirocco destroys his vintage in a few hours.

The usual approach to Algiers from Europe is by steamer from Marseilles in France. In four-and-twenty hours we sight the Atlas Mountains. At length the city of Algiers comes into view, looking like a splash of whitewash on the side of a long green hill. Away to the left extend the solid dark buildings and the boulevards of the modern French town. We enter the fine harbour, and land amidst a crowd of tattered Arabs, who are barely kept in order by French *gendarmes*. In a short time we find ourselves in a broad, tree-fringed square surrounded by *cafés*. We take our seats at a little table, and watch the motley crowd passing.

Here is a swarthy "son of the desert." He stalks by, staff in hand, with a free, graceful stride, and we cannot but admire the dignity of his fine features and solemn, deep-set eyes. On his head is a white felt cap covered by a long strip of woollen cloth, which shades the eyes in front and hangs flat at the back of the head. On his body he wears a long white gown, bound at the waist with a broad silk sash, and over this a *burnouse* or cloak of fine cloth embroidered with

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silk. Behind the Arab is a Kabyle in a carpet-like dressing-gown, and he is followed by a Jew in a *kaftan*, who in turn is succeeded by a Turk in wide, baggy trousers, a gold-embroidered vest, jacket, and turban. Amidst these the active Frenchman goes bustling in and out, in quaint contrast with the stately deportment of the Arabs.

Now let us enter the old town. The streets descend steeply from the palace of the dey to the shore, and are so narrow



IN THE NATIVE TOWN.

that we can almost touch the walls on either side. The cream-white houses thrust out their upper storeys, and almost roof in the narrow, dark, dirty alleys which climb upward between mysterious walls, broken only by heavy, brass-bound doors and barred and grated windows. The native town is a maze of tunnels, a human ant-heap. One meets all the characters of the *Arabian Nights* in the course of half an hour's walk. Here is Sindbad, who has retired into dignified ease after his adventurous voyages, and now squats on the mat in front of yonder coffee-house, puffing his little pipe and drinking his tiny cup of coffee. Here is Aladdin romping with his mischievous companions, and there is Ali Baba with his string of little donkeys. The native shops are simply open stalls. In them sit the cross-legged shopkeepers, gravely smoking, and waiting with a world of patience for custom. Here are shoemakers, weavers, and tailors all at work in full sight of the passers-by. Here is the barber shaving the head

that we can almost touch the walls on either side. The cream-white houses thrust out their upper storeys, and almost roof in the narrow, dark, dirty alleys which climb upward between mysterious walls, broken only by heavy, brass-bound doors and barred and grated windows. The native town is a maze of tunnels, a human ant-heap. One meets all the characters of the *Arabian Nights* in the course of half an hour's walk. Here is Sindbad, who has retired into dignified ease after his adventurous voyages, and now squats on the

of a patron, and leaving only the single tuft by which he hopes one day to be lifted into Paradise.

Algiers is noted for its mosques. The Great Mosque, which is close to the square where we sat to view the passers-by, has a front decorated with splendidly-carved arches, supported on marble pillars. At the entrance is a marble fountain, at which worshippers wash their feet before going in to prayers. We remove our hats on entering a church, but the Moham-medan takes off his shoes.

Let us make a little tour in Algeria, and see as much of the country as we can from the window of an East Algerian railway train. We leave the station at six in the morning, and for the first hour or two run through the well-cultivated fields and green vineyards of the Tell, passing by the way numerous little villages which seem to have been bodily transported from France. Soon we find ourselves on the borders of the Atlas region inhabited by the Kabyles, who were driven into the hills by the Arab invasion of the seventh century. They are a handsome and intelligent people; their women are tall and graceful, and they do not veil their faces like the Arabs.

Our route soon brings us to the High Plateaus. We pass through the famous gorges of Palestro, cross the dry cracked beds of several rivers by means of iron bridges, and find ourselves speeding over the flat Algerian table-land, its thin covering of grass now burnt up by the hot summer sun, but still affording pasture to large flocks of sheep. Now we see on the left of the line the glistening limestone peak of Lella Khadija, and soon after pause at a refreshingly green village shaded by orange and fig trees. On we go again, now and then passing an Arab encampment of broad-striped tents, with horses, camels, sheep, and goats feeding close at hand. As we hurry by, we see the tattered Arab shepherds shading their eyes with their hands to watch the receding train. On and on, hour after hour, we traverse the prairie-like lands; and just as the moon rises we run into the little town of Setif, where we spend the night.

At seven in the morning we are again on board the train,

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and until noon we traverse broad grassy plains similar to those of yesterday. At midday we change trains, and strike south towards the desert. The country is still of the same character; but there are rugged hills on the east of the line, and high up in the crannies we see native villages, each surmounted by its whitewashed minaret. Now and then we pass a *shott* or lake, from which the water-fowl rise in hasty flight as the train roars by. Yonder are two tall, bearded Arabs, leaning on their staffs, engaged in earnest conversation; behind them are flocks of sheep and goats, tended by their herdsmen. Exactly so might Abraham and Lot have stood in those far-off days at the moment of their parting.

Now the grassy plains begin to give place to barren steppe; the sun-baked ground is cracked and split, and we pass sandy tracts with bare red rocks. The hills close in on either side, and seem to bar the way. We have come to the gate of the Sahara, the gorge of El Kantara, beyond which lies the Great Desert. We plunge into a succession of tunnels, and then emerge upon an oasis where the palm-trees are waving in the evening breeze, and flocks of goats are being led home for the night. The moon has risen by the time we pull up at Biskra, the end of our journey and the end of the railway.

Biskra, called by the Arabs the "Queen of the Desert," has now become a popular winter resort. Its climate is one of the finest in all the world. Here East and West seem to meet. At one end of the town is the railway station; at the other end the caravans come creeping in from the desert, and the natives perform their wild barbaric dances beneath the glare of the electric light. The oasis of Biskra is wonderfully fertile, the water being obtained from underground reservoirs, which are filled by the winter rains and the melting snows of the neighbouring mountains. There are more than a hundred thousand palms and other fruit trees on the oasis of Biskra.

Tunis, which lies to the east of Algeria, has the same natural divisions, and its main features, both geographical and social, are very similar.

Not far from the city of Tunis is the site of Carthage, the capital of the great Phœnician Empire of old—a state which made wars and imposed conditions upon Rome herself, and under its renowned general Hannibal actually invaded Italy and maintained a footing in that country for fifteen years. The Romans were revenged, however, in 146 B.C., when, after six days' street fighting, Carthage was razed to the ground, and the country became a Roman province. Wherever we travel in Tunisia, we find the most wonderful ruins as evidence of the Roman occupation.

Morocco.

THE empire of Morocco, if we consider it geographically, is simply a westward extension of Algeria. It has the same three main surface divisions—the coast strip of the Tell, the High Plateau, and the desert fringe with its oases. The products of the country, where vegetation can exist, are also similar. In all other respects, however, Morocco presents a complete contrast. It is the last state in Africa to remain under complete Mohammedan rule, and compared with the other states we have visited, we may describe it as a relic of barbarism, though not quite so barbarous as it was in former years. France has now extended her influence over the empire, and much improvement may be looked for under her civilizing rule.

The country is still extremely backward. There is not a mile of railway nor a single good road in all the land. The sultan is the most absolute of rulers, but his authority scarcely extends beyond the range of his guns. The country is rarely free from some more or less serious rebellion. Fez is the most important inland town, and has some manufactures of leather and carpets. There is a palace of the sultan, and two famous mosques, one of which has a university where little besides the Koran is studied. Fez has likewise a slave-market,

where it is not uncommon for men, women, and children to be exposed for sale. On the coast are Mogador, the port of Fez, and the still more important town of Tangier, where the representatives of foreign nations have their residences.

The Valley of the Nile

I

FROM Tunis eastward for a thousand miles of coast the country is under Turkish rule; but Italy has taken steps to establish her power over this region. Tripoli, as this state is called, is mostly Saharan land, a plateau of sand or rock, with scanty vegetation in parts, and fertile oases where water is found. East of the Gulf of Sidra, in the district of Barca, there is a ridge of high ground which seems a continuation of the Algerian Mountains, and here in the valleys grow crops of barley, wheat, and beans, while olives, oranges, and lemons are also produced. There is little to interest us, however, until we reach the wonderful Nile valley, which contains the country of Egypt and the Egyptian Sudan.

The history of Egypt extends so far back into the past that it almost makes us dizzy to think of it. There are traces of men who had reached a certain degree of civilization in that land about ten thousand years ago. Written records have been found dating some seven thousand years back, and giving a fairly connected account of the country and its kings down to the dawn of history among the neighbouring peoples of the East. At the time when Moses lived, Egypt had a history more ancient than that which any European nation possesses to-day. Engraved on the walls of tomb and temple, painted on the coffin of the dead or written on papyrus and inclosed within it, these records lay for ages unknown, and only during the course of last century did men discover the key to the language in which they were written.

It was not till some four hundred years before the birth of Christ that Egypt began to link its story with that of other civilized lands. Then for a time it fell under the sway of Persia, Greece, and Rome in turn, and afterwards came under the dark shadow of the Mohammedan power. During the "Middle Ages" of Europe, Egypt was thus of little importance in Western eyes. But in modern history it has once more assumed a place of some prominence. From the time when Napoleon Bonaparte seized upon Egypt as a stepping-stone towards British India, and when the fleet that carried his army thither was blown to fragments by Nelson at the battle of the Nile, both France and Britain held firmly to the land of the Pyramids, though it was nominally under the rule of the Turk. The cutting of the Suez Canal by the French engineer Lesseps gave to Britain a shorter route to India, and increased greatly the importance of Egypt.

Some thirty-five years ago a rebellion arose in Lower Egypt, and France left to British soldiers and sailors the task of restoring order and protecting the foreign residents. Since that time the country has been really under British control, though the nominal rule is left in the hands of the Khedive and the country is a part of the Turkish Empire.

Since that time also a new Egypt has arisen. It has been said that Egypt requires two things for her prosperity—water and justice. Egypt as a home for men and women means just as much of the desert as can be flooded or irrigated with Nile water. To extend and improve the irrigation of the valley is to make new land habitable and the old land more fertile. This, then, was the first duty of the ruling power. Huge dams or barrages have been built at various points on the river, and great lakes created, so that after the floods have subsided there may be water to irrigate the land during the rest of the year. In this way two or three crops can be grown on land which formerly produced only one, while an extended system of canals leads the water to land which was formerly beyond its reach.

No less important was the duty of establishing justice in

the land. For ages the peasants had groaned under Turkish extortion and oppression, the only law they knew being the will of the stronger. Laws have been improved and courts established to do justice to all. Taxes are heavy, but they are fairly levied, and the peasant can now enjoy the reward of his own labour. At the same time schools and colleges have been opened, and other reforms introduced, so that this ancient land is now renewing its youth.

The traveller bound for Egypt usually lands at Alexandria, a city of the greatest renown, but now shorn of its former glories. Its name recalls its founder, Alexander the Great, and the ruins which abound in the neighbourhood tell of its ancient grandeur. For some three centuries before the



CAIRO: THE OLD TOWN.

birth of Christ, Alexandria was the capital of Egypt, the greatest commercial city of the world, and the chief centre of Greek science and literature.

The railway to the capital crosses the wide, level plain of the Nile delta, a huge triangle each side of which is more than a hundred miles long. The land is extremely fertile, and is intersected everywhere by canals and branches of the river. On all sides are the blossoms of the cotton plant, rich crops of wheat, and green fields of rice fringed by feathery reeds. After a journey of some hundred miles, the traveller at last sees before him, girdled with trees and gardens, the far-famed city of Cairo.

Cairo is the largest town in Africa, and something more—the most perfect example in the world of a Mohammedan capital. The modern city, with its hotels, its broad streets,

its boulevards, its newly-built houses, and its railway station, is not interesting, but the winding alleys of the old town are full of charm. Here are Arabs in their flowing robes, Turks with wide trousers and red fez, coal-black negroes from the Sudan, half-naked donkey-boys, veiled women, Egyptians of the higher class wearing a frock coat, and occasionally a group of British soldiers, the representatives of the ruling power. There is a wonderful variety of costume and colour in the Cairo streets.

Cairo attracts its visitors not only by its dry and sunny winter climate and the picturesque life of its native streets, but by the wonderful examples of ancient architecture which it has to show. Most of these are stately mosques with



THE CITADEL, CAIRO.

domes and minarets from which Moslem priests call the faithful to prayer. At the south-east corner of the city is the famous citadel built by Saladin in 1166. It contains a palace of the Khedive and three mosques, one of which is known as the "alabaster mosque." Other interesting buildings are the palace and well of Joseph, and the seven towers, which are even now known as the "Granary of Joseph," and still serve their ancient purpose. In the museum, amongst a wealth of relics, we may see the mummies of men and women who

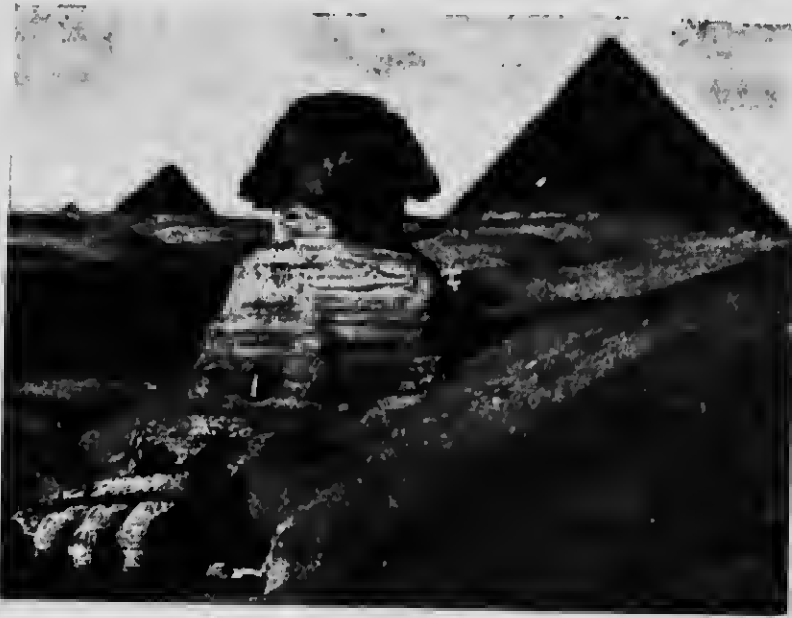
Walked about (how strange a story!)
In Thebes' street three thousand years ago.

Every visitor to Cairo is eager to see the Pyramids. These Pyramids were erected in ancient days above the burial-places of kings or nobles. The largest of the Pyramids stand together in a group, some seven or eight miles south-west of Cairo, on the left bank of the Nile. Let us take the electric car to Gizeh and visit them. There are nine Pyramids near this place; three of them are the largest and most celebrated in existence.

The most marvellous of all is the Pyramid of Cheops, which is truly one of the wonders of the world. It was erected more than five thousand years ago, it covers a space of thirteen acres, and it is nearly five hundred feet high. Herodotus tells us that it took thirty years to build, and that one hundred thousand men were employed in the work. It took ten years to make a causeway to the quarries, and twenty years more to hew the mighty blocks, transport them to Gizeh, and rear them into their places. We are lost in astonishment at the skill of these grand old builders, and while we gaze at their work we try to conjure up a picture of the scene when the Great Pyramid was slowly rising in these far-distant ages. We try to imagine the busy quarries ringing with the sound of hammer and chisel, the long strings of slaves straining under the whips of their task-masters, the creaking wagons on the causeway, and the vast machines which slowly swung the heavy stones into position. The base of the pyramid is square, and each side exactly faces one of the four cardinal points. The blocks of masonry which compose it are from two to five feet high, and each of them recedes from the one below it like the steps of a stair.

Near the Great Pyramid is the mysterious figure of the Sphinx, a huge man-headed lion hewn out of the living rock. No one knows what the figure represents, but there it stands, perhaps the oldest monument in the world, buried in the sand, with only its enormous head and shoulders lifted above its desert shroud. Its face has been much mutilated, but even thus battered and weather-worn it is one of the most impressive sights which this wonderful land has to show.

The upper valley of the Nile is monotonous, but for all that it possesses an ever-changing beauty. The hills shut in the narrow plain on the east, and the desert seems to be struggling continually to overwhelm the green fields through which the fertilizing river flows. Every traveller praises the exquisite tints of the Nile scenery, and dwells upon the vivid contrast between the brown villages fringed with palm-groves and crowned with white minarets, and the waving fields of pale green corn, sweet-scented bean, or purple lupine blossom.



THE SPHINX AND THE GREAT PYRAMID.

Every traveller, too, is charmed with the magic of the ancient river. Sometimes the vast blue sky seems to quiver with heat, and there is not a breath of wind. Then the river is like a broad sheet of glass; the great pointed sails of the Nile boats flap idly against the yard, and "the only sound to be heard is the slow, sleepy song of the blue-gowned boatmen as they drag the tow-ropes along the steep mud-bank, where the mimosa trees crowd thirstily down to the water's edge."

Along the banks of the Nile, as far as the first cataract,

and even beyond it, are ruins of monuments and temples which carry us back to the dawn of history itself. The eastern hills which fringe the Nile are honeycombed with the grotto-tombs of Egyptians who lived thousands of years before the birth of Christ. These tombs are adorned with pictures, still richly coloured, showing us daily scenes in the life of the long-departed men and women who lie buried within them. From these pictures we learn much of the life and customs of the ancient Egyptians. Elsewhere, as at Thebes, are the majestic remains of vast temples, with noble portals, colossal statues, long avenues of sphinxes, and forests of columns which amaze and bewilder the beholder, and reveal to him a nation which had attained to a very advanced stage of civilization long before the first page of history was written.

For the most part the Egyptian *fellah* or peasant lives in mud villages near the river. Sometimes these villages are built on high mounds; sometimes they are built on flat land, protected from the Nile floods by thick walls and a wide moat, which is full of water in October, an evil-smelling marsh in December, and dry in spring. Here the naked little children and the dogs of the village bask together in the sun. In the midst of such a village there is usually an open space, with the house of the *sheik* or chief on one side of it. Some villages possess a beautiful green, surrounded by rows of waving palms.

The richest part of Egypt is found in the plain above Assiut, where the country is low and the river banks are high. The fields are all divided by narrow drains into squares like those of a chess-board, and at every few hundred feet along the bank of the river rises the tall pole of the *shadûf* or watering-machine. "All day long at the water's edge one half-naked *fellah* fills the leathern bucket in the water, and another bronze-like figure at the top of the bank empties it into the trough that irrigates the fields. In Nubia the *shadûf* has disappeared, and is replaced by the large, round *sâkieh* wheel, to whose revolving spokes are fastened a multitude of earthen jars, which fill themselves in the river, and slowly turn round until they spill their contents into a wooden reser-

voir. These wheels are turned by oxen; behind them is slung a shallow basket where sits the drowsy *sâkîch* boy."

The Egyptian fellah seems to have altered but little in appearance since the days of Moses, for we see his counterpart on the wall-pictures of the oldest tombs and temples. He is a well-built man, with a fine oval face, a brown complexion, pearly white teeth, brilliant black eyes, a bushy beard, and a shaven head. He wears a smock of blue cotton or brown woollen cloth, and on his head is a white cap covered with a red fez, round which a long strip of muslin is rolled to make a turban. The women are remarkable for their graceful carriage, which is seen to perfection when they poise great water-jars upon their heads, and, thus laden, walk erect with stately grace. The fellah rarely eats meat, his chief food being cakes of unleavened flour, black millet-bread, grain and beans, dates and melons. He does not know the taste of alcoholic liquors, but he is a great smoker. He is always merry; he chats, jokes, sings, and works hard.

II

At Wady Halfa we reach the southern boundary of Egypt. Beyond this the country is known as the Sudan. The name Sudan, or "Land of the Blacks," is applied to a belt of land which stretches across Africa to the south of the Sahara. The western portion, as we have seen, belongs to France. The eastern or Egyptian portion is now known as the Anglo-Egyptian Sudan. It extends southwards from Wady Halfa to the protectorate of Uganda. From the early years of last century this district was a province of Egypt. Soon after the rebellion of which we have spoken, a great uprising took place in the Sudan, and for many years it was in revolt under the Mahdi, whom the people held to be a great Mohammedan prophet. Lord Kitchener was then at the head of the Egyptian forces, and by carefully training his soldiers, and extending the railway across the desert, he was able to bring a fine army of British and Egyptian soldiers to meet the rebels.

At the battle of Omdurman, close by Khartum, where the gallant General Gordon had lost his life in trying to hold out against the Mahdi, Kitchener inflicted a crushing defeat upon the rebels and reconquered the province. It is now under the joint rule of Britain and Egypt, and the country is quickly recovering from the devastation and slaughter which it had to endure while under the power of the Mahdi.

The Anglo-Egyptian Sudan consists for the most part of great grassy plateaus, dense thickets, and barren steppes, watered by the Nile and the myriad branches of its important tributary, the Bahr-el-Ghazal. Tangled forests skirt the sluggish rivers and brooks, which are often blocked by floating islands formed of water-plants and other forms of vegetation. For many miles a way had to be cut for steamboats through the *sudd* or



KHARTUM.

mass of floating weeds, but there is now regular communication to Gondokoro, on the borders of Uganda. Wherever there is a good supply of water, the land is astonishingly fertile: durra fields wave ten feet high; cotton, sugar, and wheat grow luxuriantly. Where, however, water is scarce, the land is little better than desert. Parts of the Sudan are very rich in big game. Herds of elephants, zebras, giraffes, and antelopes are seen, and in their wake prowl the lion and the leopard.

The people of the Sudan are mostly negroes. Cattle-grazing, agriculture, and hunting are their chief occupations. Some of the tribes show great skill in working iron, wood, and clay; and others are, according to their lights, good agriculturists.

Before the Mahdi insurrection, the total population of the Egyptian Sudan was estimated at about ten millions. The

country has been so terribly ravaged by the armed bands of slave-raiders, and by the religious wars of fanatical dervishes, that many parts of it are almost without inhabitants. Under good government, however, the Sudan will develop a large trade in ivory, grain, coffee, tobacco, ostrich feathers, rice, and cotton, nearly all of which are products of the Bahrel-Ghazal district. In the south the forests abound in india-rubber. In the drier countries of the north, irrigation alone is needed for the production of large crops of wheat. The railway from Egypt has already reached Khartum, and a



GORDON COLLEGE, KHARTUM.

branch has been formed to Suakin on the Red Sea. This railway and that of Uganda will open the country to trade, and in the course of time civilization will follow.

The capital of the Sudan is Khartum, at the junction of the White and the Blue Nile. It is admirably situated for becoming a trade centre. Since its recapture the town has been largely rebuilt, and among its most notable structures is a fine college erected in memory of General Gordon and designed for the education of native chiefs and magistrates, and of engineers and other skilled leaders of industry.

THE BRITISH EMPIRE

I

DURING the course of the rapid survey of the world which we have now completed, we have found in every continent lands where the British flag flies over men and women of our own kindred and speech, as well as over people of many other races and tongues. We must now gather up all these widely scattered members of the Empire into one group in our mind, and by a still more rapid survey than before try to realize what we mean by the British Empire. So rapid is our journey of imagination to be that we shall "put a girdle round the earth" in the space of one brief day of twenty-four hours.

Let us first be sure that we know what a day really is. While we stay at home, or even when we travel at the usual slow pace of express train or ocean steamship, we count our day from one sunrise to the next, or rather from one midnight to the next. The beginning of our day is a point of time which the apparent movement of the sun fixes for us. But now let us once more suppose ourselves afloat in space, suspended between earth and sun, in that very useful gravitation-proof sphere with which we began our world-study. On the side of the earth which we see it is always day; night is found only on the other side of the solid earth. Day and night seem to be not so much a question of time as of place. Yet we know that the people down below us are counting days and nights by time just as they have always done.

How can we, up in our isolated sphere, reckon the days as

they do, so as not to lose our count of time? We must fix upon some mark on the earth's surface which we can recognize. When this mark comes into view on the sunrise line, we may call it, say, Monday morning. It sweeps round to sunset and disappears, and when again it comes into view we call it Tuesday morning, and so on. If we are to have separate days at all, with names and numbers of their own, there must be some line fixed on the earth's surface where each new name or number is to begin.

When men sailed westwards from Europe to the New World, they kept count of the days as if they were at home, though, as we have seen, the dawn came a good many hours later. When they sailed eastward to the Indies and to China and to Australia and New Zealand, they still reckoned the days as in their own land, though now the dawn came many hours earlier. If two ships had sailed from the Old Country on opposite courses and had met in mid-ocean on the Pacific, a curious thing would have happened: the dawn which brought in Monday to the one ship would have been called Tuesday on board the other. This difference of dates actually happens among the Pacific Islands. It would be very inconvenient in the centre of a continent, but in the great expanse of the Pacific, with only far-scattered islands here and there as homes of men, the change of reckoning does not cause much trouble. It is necessary to understand the need for such a dividing-line, however, and to know where that somewhat irregular line has been drawn, before we start on our review of the Empire, for it is an Empire on which the sun never sets, and on which every hour of the day is an hour of dawn.

Now we will set out, starting from the international date-line in mid-Pacific where days and years are reckoned as having their beginning. We are to watch the Empire flag rising to greet the sun over one member of the Empire after another, and in order to make quite sure that nobody shall forget to hoist the flag, we will choose for our journey Empire Day, or Victoria Day as it is often called.

We know the flag, of course. We see it flying over our schools

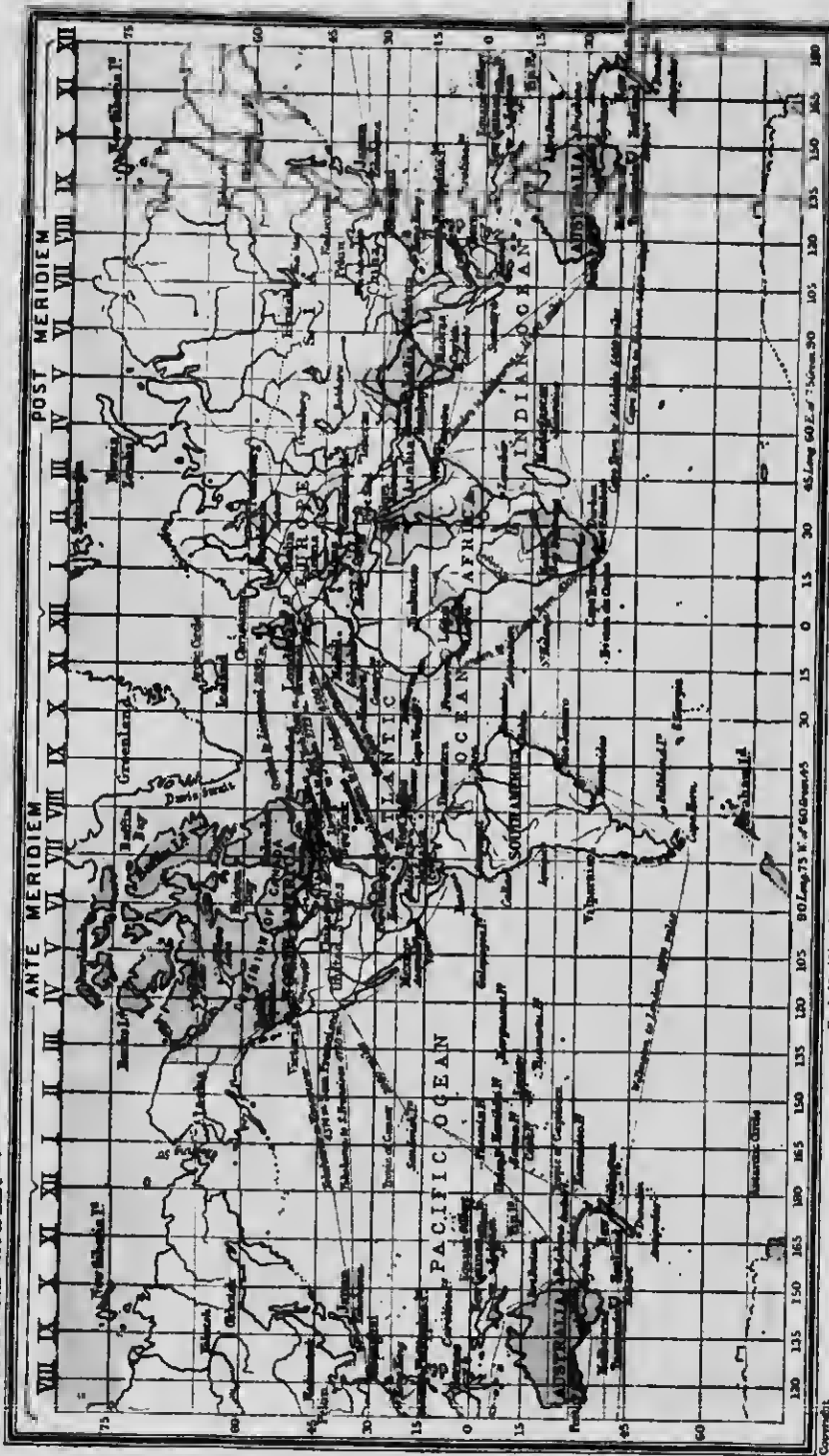
and our public buildings every day. We call it the Union Jack. "Jack" simply means a small flag which was formerly used by sailors, and "Union" reminds us that our flag was first made as a symbol of the Union of England, Scotland, and Ireland under one king. In our day the flag symbolizes a much wider Union than that. It represents the Union into one Empire of all the varied lands over which we are now to see its familiar folds spread out to the morning breeze.

Now we are at this imaginary line where west becomes east, and where days are born. As the dawn strikes us we rise on the wings of imagination—the only means of travel which will serve our need—and journey westwards with the sun. The first part of the Empire to greet the new Empire Day is the Fiji Islands, once the home of the most utter barbarism, but now a fair and fertile group where law and order rule. The drum beats, and we see the Union Jack go fluttering to the top of the flag-pole in front of the governor's residence, as a token that these islands are in the keeping of Britain. We travel westward with the dawn, and in fifteen short minutes we see the same scene being enacted in Wellington, the capital of New Zealand, the "Great Britain of the Southern Seas."

Now we are over the ocean, and we may watch the flag rising blithely into the morning air as we pass from island to island. In an hour and a half we see it unfurling its folds at Brisbane, the capital of Queensland, where we are on the threshold of Australia, an island-continent which is British from end to end. Soon after, the Union Jack is hoisted at Sydney, the capital of New South Wales; at Hobart, the capital of Tasmania; and at Melbourne, the capital of Victoria, and the largest of Australian cities. Twenty minutes later it flies aloft above the pleasant town of Adelaide, the capital of South Australia. For the next hour and a half we speed across deserts, and then we see the flag once more at Perth, the capital of Western Australia.

Almost at the same moment the familiar "red, white, and blue" goes aloft at Government House, Hong-Kong, which

The World rotates from West to East —



Each Meridian drawn on the Map represents 15° of Longitude or one hour in Time

CHART OF THE WORLD, SHOWING THE BRITISH EMPIRE.
(The numbers at the top show the hour, when it is noon at Greenwich.)

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stands at the gate of China, and is the greatest trading centre of the Far East. In twenty-five minutes we see it go up at Sarawak in British Borneo, a rich, tropical land. A similar interval elapses, and the Union Jack is seen shaking out its folds at Singapore, one of the busiest ports of the East. Five minutes more, and it is flying at Malacca, in the Straits Settlements of the Malay Peninsula. Twenty minutes later the flag lifts on the wind at Rangoon, the chief port of Burma, a land rich with timber and rice.

In half an hour the merry rattle of the waking drum is rousing the troops, both British and native, at Calcutta, and the Union Jack is again waving in the breeze. We are now in India, that vast land which has been called "the brightest jewel in the British crown." In twenty minutes more the flag will go up in the lovely and fruitful island of Ceylon. Now we speed westwards across the great brown plains of India, and our approach is everywhere marked by the appearance of the flag, which reminds the myriad inhabitants of this mighty peninsula that the protecting arm of Britain is about them. Benares, Lucknow, Cawnpore, Madras, Agra, Delhi, Lahore, and Bombay—great cities of ancient renown—hoist the flag the one after the other, and our last glimpse of it in India is at Karachi, the most westerly of its sea-ports.

Ere an hour has sped we see it again rising with the sun on the islands of Mauritius and the Seychelles, in the Indian Ocean. In another hour it is fluttering aloft above Aden, the great fortified coaling-station which guards the entrance to the Red Sea. Half an hour more and it is seen, proud and high, at Zanzibar, for centuries the great centre of the slave-trade, and now a bustling sea-port.

We are now on the threshold of Africa, and the British flag greets the morning sun over more than three million square miles, or a full quarter of the whole continent. At brief intervals the flag soars aloft at Pietermaritzburg, the capital of Natal; at Cairo, the capital of Egypt; at Khartoum, the capital of the Sudan; at Pretoria, the capital of the Transvaal; at Bulawayo, the capital of Rhodesia; at Bloem-

fontein, the capital of the Orange Free State ; at Cape Town, the capital of the Cape of Good Hope ; and at various government stations in our West African territories of Nigeria and the Gold Coast. Wherever the flag rises it betokens at least peace, good government, and even-handed justice for all men, whatever their race, creed, or colour.

While faithful black hands are hoisting the flag at the most easterly station of Nigeria, the island of Malta, the little "military hothouse" of the Mediterranean, is echoing to the waking drum, and British colours begin to wave above fortress, dockyard, and government building.

A quarter of an hour after the flag has been unfurled in Nigeria, it is seen saluting the sun on the lonely little island of St. Helena in the South Atlantic. When it rises above the Gold Coast, the rattle of the drum is heard in the Tower of London, and the Union Jack soars aloft above the fortress which has kept watch and ward over London, the great mother city of the British race, for more than eight centuries. While London is beginning to awaken to the labours of the day, distant Fiji is wrapped in midnight slumber.

Hardly have the halyards of the Tower flag been secured before the Union Jack flutters bravely above the arsenal and the dockyard of Portsmouth, the great naval centre of Britain. Almost at the same moment it is hoisted above the forts which guard the mouth of the Mersey and the great sea-port of Liverpool.

Now we see it fly aloft to the rattle of the drum above the King's bastion of Edinburgh Castle, and soon it is waving on every other fortress in the motherland. A few minutes after it lifts on the morning breeze above Dublin Castle, the Rock of Gibraltar, the key of the Mediterranean, sees it soaring high. Next it flutters to the mast-head on Haulbowline Island in Cork Harbour, and ten minutes later it rises on Valentia, the rocky outpost of Ireland.

Now we are above the broad Atlantic, flashing westward towards the New World, the long ocean rollers below us, and the sunrise gilding the horizon. As we fly on the wings

of the morning, we see dimly beneath us great ocean liners and scores of cargo vessels speeding from shore to shore, "unhasting, unresting," and observe that two out of every three of them fly the red or the blue ensiga with the Union Jack in the corner.

Two hours and forty minutes elapse, and then we sight the shores of Newfoundland, and the flag is seen ascending at St. John's.

Now we are on the threshold of our own portion of the Empire, the great Dominion of Canada, and during the next four hours the Union Jack will go aloft over the government buildings of the provinces and of the Dominion—Halifax, Charlottetown, Fredericton, Quebec, Ottawa, Toronto, Winnipeg, Regina, Edmonton, and Victoria, and over the public buildings of many other cities and towns as well. From ocean to ocean it will rise over half the continent of North America, the richest and most promising part of the British Empire.

Meanwhile the flag will also be hoisted at Georgetown in British Guiana, on a host of lovely West India Islands, including Trinidad and Jamaica, and at Belize, in British Honduras. Now Esquimalt on Vancouver Island hoists its flag, and we sweep out above the Pacific, and watch the familiar bunting hauled aloft as we pass island after island. Two hours elapse, and we see it rising on the Friendly Islands. Half an hour later sunrise bursts upon Fiji once more, and the Union Jack is again unfurled to greet the beginning of a new day.

We have put a girdle round the earth, and for twenty-four hours we have witnessed the ceaseless hoisting of the Union Jack on continent and island all round the world. Think of it! Somewhere or other on the earth, year in year out, during every hour of the day, British hands are hoisting the Union Jack. The sun never sets on it, and we may travel the whole world round and never touch land on which it is not flying.

II

Now let us try to realize what manner of heritage it is that has become ours, and what the British Empire means as to its extent and its resources. Our Empire is the vastest that has ever been brought under the rule of one sovereign. The empires of ancient days sink into insignificance beside it, for in the time of their greatness only a fraction of the world was known. The British Empire is unique; the world has never seen its like.

Let us make this plain by means of a few figures. The whole land surface of the globe is estimated at fifty-five millions of square miles. Of this area we Britons hold some thirteen millions of square miles, or a little less than one fourth. Let us put the comparison in another way. The whole continent of Europe covers something less than four millions of square miles; it could be contained more than three times in the British Empire. The Dominion of Canada alone, "eldest daughter of the Empire," falls but little short of the whole area of the European continent. A comparison between the extent of the British Isles and that of the Empire is almost ridiculous. For every square mile in the United Kingdom there are more than a hundred square miles of British territory beyond the seas.

There is still plenty of elbow-room in Greater Britain; there are still wide tracts of land crying aloud for settlers, and there are also great waste spaces that will always be solitudes. Nevertheless, the population of the Empire is proportionate to its area. The total population of the world is said to be 1,590 millions. Of these, the British Empire numbers 417 millions, or more than one fourth. For every white man, woman, and child under the Union Jack there are six coloured persons, yellow, brown, or black.

Our imaginary tour of the Empire has already shown us it is a *World Empire*. In order to travel round the British Empire it is necessary to travel round the world. No conti-

ment, no ocean, no climate, from the icy polar wastes to the sweltering jungles of the tropics, is without its British patch. Our people seem to have taken samples of territory all over the world. They seem also to have taken their samples in equal proportions from the northern and from the southern hemisphere. In the northern hemisphere the United Kingdom, Canada, and India occupy between them some five million square miles; in the southern hemisphere Australia, New Zealand, and South Africa cover about the same area.

Now this is very important, especially for the Old Country, which depends largely upon the rest of the Empire for its food-supplies. We know that the northern and southern hemispheres have their seasons reversed. Thus one half of the Empire is enjoying summer while the other half has winter. While the land lies cold and bare in the northern hemisphere, it is yielding its harvest in the southern. It is always harvest-time somewhere in the British Empire, and communication is now so swift and so cheap that grain, fruits, and cattle can be readily sent to Great Britain from even the most distant of her possessions.

We have also seen that this world-wide Empire is richly varied in character and productions. There is, indeed, no article of human need or desire that may not be obtained within its wide bounds. The British lands in the temperate zones produce grain, meat, and wool in abundance. The forests of Canada and of Australia yield stores of splendid timber, while Great Britain has those unrivalled treasures of coal and iron which lie at the root of her prosperity. Rice, cotton, tobacco, sugar, and other tropical products flourish within the Empire, and we need not seek beyond it either for the necessaries of life or for its luxuries and adornments.

A glance at the map shows us that our Empire is *oceanic*. The Russian Empire consists of continuous land, but the various states of the British Empire are united by means of the sea. A great writer observes that Greater Britain resembles a world-Venice, with oceans for streets. This is a very important fact, and one that should never be forgotten.

Our Empire has been founded on the seas, is now maintained on the seas, and will only last as long as we command the seas. Britannia must rule the waves if the British Empire is to be held together. We must have an open highway all over the world, and our trading-vessels must be able to traverse it without interruption.

The British people are the ocean-carriers of the world; their merchant shipping is nearly twice as great as that of all other nations taken together. To and fro between Great Britain and the ports of the whole world her merchant ships come and go like shuttles in a loom. On the outward voyage they are laden with the coal and manufactured goods of the British Isles; homeward bound their holds are full of raw materials and of food. Were a foe to overcome us upon the seas, the British Empire would lie at his feet. The heart of the Empire would cease to throb; her busy factories would be idle; her myriad workers would starve. For these vital reasons Britain maintains a huge navy and fortified coaling stations all over the world.

III

We have seen that the temperate zones are the most desirable regions of the earth. They have produced the highest types of mankind, and within them alone can the white man live comfortably and work effectively. There a man is encouraged to labour; the heat is not so great as to sap his energy, nor is the cold so intense as to numb his powers. The savage in the tropical forest has but to put out his hand to find sufficient food to keep him alive. Nature is most bountiful, and the balmy skies make clothing and shelter almost unnecessary. In the temperate zones, however, a man must work to live. He must have clothes to keep him warm and a roof to shelter him. He must clear and till the land before he can secure a steady, regular livelihood. His harvest comes but once a year, and he must learn to lay by something for the future. He discovers that in concert with others he can

do many things which are impossible to his unaided strength. He thus learns to unite into clans, tribes, and states. In this and in many other ways he develops himself, and in the course of long ages becomes the civilized being which we know as the white man.

Keeping these facts in mind, we may now divide the British Empire into two great parts—the lands within the temperate zones, which we may call the *white man's country*; and the lands within the torrid zone, which we may call the *coloured man's country*. The frozen regions of the frigid zone may be left out of account altogether. The British Empire, we observe, lies largely within the temperate zones. It is mainly the white man's country, and in a large part of it a Briton may settle down without discomfort or danger to health.

In the north temperate zone, which has been the seat of all the great empires of the world, we find the motherland, the British Isles, and our vast Dominion of Canada. In Canada dwells one of the five Nations of Greater Britain, a white race with a great future before it. In the south temperate zone we have seen wide British lands at the extreme end of Africa. Here dwells the second of the five Nations, a race of Europeans living amidst a dense population of natives. The great island-continent of Australia lies mainly within the same zone. Here is the third of the five Nations, inhabiting as yet only the fringes of the continent. The fourth occupies the island-group of New Zealand, which is wholly in the south temperate zone. The fifth inhabits the mother country.

Now let us look at the coloured man's country within the British Empire. It lies, of course, almost wholly within the tropics. A great region of west, central, and east Africa is mainly inhabited by negroes, most of whom are uncivilized. The only white men among them are British officials, soldiers, and traders.

In the vast peninsula of India we find another coloured man's country, densely peopled by nearly one fifth of the world's whole population, all of dark skin, but varying in

civilization from the most degraded savage to the highly-cultured Hindu. Here, again, the white men are officials, soldiers, planters, and traders. They are not settlers, as in the British lands of the temperate zones, but sojourners. There are elevated parts of the peninsula where white men may live in comfort ; but India can never be a white man's country, for white children cannot be reared in it.

Ceylon, the Straits Settlements, North Borneo, New Guinea, and British West Africa will also remain the coloured man's country, at any rate until we have learned how to overcome the diseases which attack white men in tropical lands. There are, of course, parts of most of our tropical possessions which might become the homes of white men. These are lofty plateaus or mountainous islands specially tempered by the sea.

This division of the Empire into the white man's country and the coloured man's country is important from another point of view. The white man's country is chiefly occupied by the five Nations who are mainly of British race. They live practically the same life, think the same thoughts, honour the same king, and profess the same religion, though oceans roll between them. Britons have a strong faith in self-government, and this they have carried with them across the seas. All the white man's lands of the Empire have Parliaments of their own, and their citizens are free to elect those who make the laws and levy the taxes. In the coloured man's country the natives have no such rights, for in many cases they are mere savages, and in others they could not yet be trusted with such power. Wherever possible, however, as in India, they are invited to assist both in the central government and in the government of towns. In the coloured man's country there are no elected parliaments, and the real ruler is the British Parliament.

The full title of the British sovereign is " King of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas, Defender of the Faith, Emperor of India." Notice that the King is " Emperor of India " alone.

He acts as an emperor over most of the remaining coloured man's country, though he has not assumed the title. Of the white man's country he is merely "king."

From this we see that, strictly speaking, there is no "British Empire," although it is convenient to use that name for all the dominions over which our King reigns. The word Empire suggests a collection of nations held together by force, but we already know that more than half of the British Empire is the abode of free peoples. The kindred peoples are held together by the slightest of bonds, which are, nevertheless, stronger than links of steel. A common ancestry, a mother country, a common language and traditions, weld us together whether we live in Canada, in Australia, in New Zealand, in South Africa, or in the United Kingdom. The outward and visible sign of our unity is the common headship of the British King.

Modern statesmen are seeking to devise plans by which the United Kingdom and the self-governing Nations may combine into a single British World-State. The idea is one that stirs the imagination, and every one must wish for its accomplishment. Let us hope that as the years roll on Britons all over the world will draw nearer and nearer

Into one imperial whole,
One with Britain, heart and soul—
One life, one flag, one fleet, one throne.

APPENDIX

Explanation of Terms

- Affluent**, a tributary ; a stream flowing into a river or a lake.
- Alameda**, a public walk between rows of trees ; a pleasure ground [Spanish].
- Alkali**, a general name for substances like potash and soda.
- Alluvial**, formed of material carried down by running water.
- Antarctic**, belonging to the extreme south ; opposite to the Arctic.
- Arable**, suitable for agriculture ; literally, fitted for ploughing.
- Archipelago**, a group or cluster of islands ; an island-studded sea ; so called from the *Ægean* Sea, which the Greeks called the *Archipelago*, or "Chief Sea."
- Arctic**, belonging to the extreme north.
- Arsenal**, a place where warlike stores, naval or military, are kept.
- Artesian Wells**, deep wells bored to reach underground water ; named from Artois, in France, where such wells were first made.
- Atmosphere**, the sphere or shell of air which surrounds the earth.
- Avalanche**, a mass of snow and ice sliding down a mountain ; a snow-slide.
- Axis**, the imaginary line passing through the earth, round which it rotates.
- Bank**, a part of the sea bottom which rises towards the surface, causing shallow water.
- Barge**, a flat-bottomed boat for carrying goods.
- Barrens**, tracts of land too cold for vegetation.
- Battery**, a place on which cannon are mounted.
- Bazaar**, a Persian name applied to a market-place or exchange ; a fair.
- Beach**, a sloping sandy or pebbly shore.
- Billow**, a large wave.
- Bluff**, a high, steep bank overlooking a river, plain, sea, etc.
- Bolas**, heavy balls joined by ropes, thrown so as to entangle and trip up an animal.
- Bore**, the wave formed by the tide flowing rapidly up a narrow bay or an estuary.
- Boulevard**, a broad promenade or street bordered with trees, named from such walks formed upon the demolished fortifications ("bulwarks") of a town.
- Brackish**, salt to the taste ; between salt and fresh [from old word *brack*, salt].

- Breaker**, a wave whose crest breaks into foam, usually in shallow water.
- Breakwater**, a barrier erected to break the force of the waves.
- Bulletin**, an official report issued to the public.
- Café**, a coffee-house or restaurant [French].
- Canal**, a watercourse or large ditch cut for navigation or irrigation purposes.
- Canyon**, a deep narrow gorge or ravine cut out by flowing water.
- Caravan**, a company of merchants, etc., travelling together for security, especially when crossing a desert.
- Cataract**, a waterfall or cascade.
- Cereals**, grain or corn plants used for food.
- Chinook**, winds blowing from the Rocky Mountain area towards the prairies, first so called from their blowing from the country of the Chinook Indians.
- Citadel**, a fort or strong place in or near a city.
- Climate**, the weather conditions of a place as regards temperature, rainfall, winds, etc.
- Coaling-station**, a town or island, often fortified, where stores of coal are kept for the use of ships, especially those of the navy.
- Coal Measures**, the rocks among which coal may be found.
- Commerce**, interchange of goods between one place and another.
- Commissioner**, one who has authority (*commission*) to perform some special work.
- Coniferous**, bearing fruit in the form of cones, as pine, fir, etc.
- Continent**, a large extent of land not broken up by seas.
- Convict Settlement or Station**, a place to which convicted criminals are sent as a punishment.
- Coolies**, an Indian name for "labourers," applied chiefly to Hindus and Chinese.
- Corral**, an enclosure into which horses, cattle, etc., are driven in order to be more easily caught.
- Craft**, general name for ships.
- Crater**, the cup-shaped opening of the vent of a volcano.
- Creek**, a narrow bay or channel; sometimes used for a small river.
- Cyclone**, a storm with a circular or rotatory movement; a large whirlwind.
- Deciduous**, having leaves that fall in autumn, as birch, oak, etc.
- Defile**, a narrow pass or valley; literally, a place where soldiers must march in single file.
- Delta**, low land formed of mud deposited at the mouth of a river; so called from the Nile delta, which was named, from its shape, after the Greek letter *delta* (Δ).
- Desert**, a barren, uninhabited place.

- Dhow**, a native ship, usually with one mast, used by Arab traders on the East African coast.
- Divide**, a ridge of high ground forming a watershed between two slopes.
- Dock**, an artificial basin in which ships may float.
- Drainage Basin**, the whole area which slopes towards and drains into some river, lake, etc.
- Dredge**, to deepen a channel by scraping up mud, etc., from the bottom.
- Dynamo**, a machine for producing electric current.
- Emigrant**, one who migrates or removes out of a country.
- Equable**, equal and uniform; free from extremes of heat or cold.
- Equator**, an imaginary circle passing round the earth midway between the north and south poles.
- Eruption**, a violent outflow of lava, etc., from a volcano.
- Escarpment**, a steep slope, especially of a high plain passing to a lower level.
- Estancia**, the dwelling-house on a stock-ranch [Spanish].
- Estuary**, the wide mouth of a river, in which the sea ebbs and flows.
- Evaporation**, changing into vapour or steam.
- Export**, to send goods out of a country in the way of trade.
- Factory**, a workshop or manufactory; also an outlying station of a trading company.
- Fellah** (in plural, **Fellahs** or **Fellahin**), Arabic word meaning a "tiller of the soil;" used for the native Egyptian peasants or farmers.
- Ferry**, a place where passengers, etc., are carried by boat across a river or other water.
- Fjord**, a long, narrow, rock-bound inlet or bay.
- Fodder**, dried food, such as hay, used for feeding cattle, etc.
- Fossils**, remains of plants or animals found embedded in rock, etc.
- Foundry**, a factory in which iron or other metal is melted and poured into moulds.
- Frontier**, the boundary separating one country from another.
- Gauchos**, Indians or half-breeds of the Pampas; cow-boys.
- Gharry**, an Indian carriage.
- Glacier**, a slowly moving stream of ice forced down a slope by the weight of snow on the hill above.
- Gendarmes**, armed policemen [French].
- Geyser**, a hot spring throwing a jet of steam and water into the air at intervals; named after a spring in Iceland known as *Geyser*, or the "Gusher."
- Gold Reef**, a vein or lode of gold-producing rock.
- Gorge**, a narrow river valley or mountain pass; literally, "a throat."

Explanation of Terms

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- Gulch**, a narrow rocky valley or ravine.
- Gulf**, a bay, usually of large size, with a narrow entrance.
- Headquarters**, the quarters or residence of a general or head officer.
- Hemisphere**, half a sphere.
- Iceberg**, a huge mass or mountain of floating ice broken off from a glacier.
- Ice-pack**, drifting ice packed close together.
- Immigrant**, one who migrates or removes into a country; a settler.
- Import**, to receive goods into a country in the way of trade.
- Industry**, a general name for manufactures and similar occupations.
- Irrigation**, watering the soil by causing water from artificial channels to flow over it.
- Ironstone**, a general name for ores yielding iron.
- Islet**, a small island.
- Isthmus**, a narrow neck of land joining two larger portions.
- Junk**, a Chinese or Japanese ship, usually with three masts.
- Karoo**, a general name for the dry, elevated plains of South Africa; from a Hottentot word meaning "hard."
- Kopje** (pron. *Koppie*), a Dutch name for a flat-topped hill in South Africa.
- Kraai**, Dutch name for a South African native hut or village; a form of the word "corral."
- Lagoon**, a shallow pond into which the sea flows.
- Latitude**, distance north or south of the equator, measured in degrees.
- Laurentian**, belonging to the St. Lawrence river or basin; especially, a series of hard rocks found in that district.
- Lava**, rock discharged from a volcano in melted form.
- Lianos**, grassy plains, especially in South America [Spanish].
- Locks**, basins in a canal where ships are raised or lowered to a different level, usually by allowing water to flow in or out.
- Lode**, a vein of rock containing metallic ores.
- Loess**, a soft rock or deposit of a fine, yellowish-gray loam.
- Longitude**, distance east or west from a given place or meridian, measured in degrees.
- Mandarin**, a general English name for a Chinese official.
- March**, a boundary (= "mark"); lands "march" with one another which have a common boundary.
- Meridian**, a line drawn from the north to the south pole, passing through places which have midday at the same time.
- Mesa**, a flat-topped hill rising from a plain.
- Minaret**, a tall, slender tower of a Mohammedan mosque; an officer of the mosque, called a *muezzin*, ascends the tower at fixed hours to call the people to prayer.

- Monsoons**, winds which change with the seasons, especially those in the Indian Ocean.
- Moors**, waste ground covered with heather, mosses, etc. Also, natives of Morocco, etc., the Mohammedans who occupied Spain during the Middle Ages.
- Moraines**, heaps of stones, etc., carried by glaciers, and deposited where the ice melts.
- Mosque**, a Mohammedan place of worship or sacred building.
- Muskeg**, a bog or swamp.
- Navigable**, deep enough to be used by ships.
- Nomads**, people who live in tents and wander from place to place to find pasture for their flocks, or in search of game.
- Oasis**, a fertile spot in a desert.
- Ocean**, one of the main divisions of the salt water that covers the greater part of the earth's surface; also, the whole water-surface of the globe.
- Ore**, rock, etc., from which metals may be extracted.
- Oriental**, eastern; used of the lands, etc., that lie to the east of Europe.
- Pampas**, treeless plains in the south of South America [Spanish].
- Pariah**, outcast; belonging to no caste (in India); a mongrel dog.
- Parsee**, descendants of Persian fire-worshippers in India; literally, "Persian."
- Pastoral**, connected with the feeding of sheep, etc., or pasturing, as distinguished from agriculture.
- Pasture**, land covered with grass suitable for feeding cattle, etc.
- Peninsula**, a portion of land almost surrounded by water; literally, "almost an island."
- Pygmy** (also **Pygmy**), a dwarf; a word used by the ancient Greeks, from the name of a measure of length a little more than a foot long.
- Plateau**, a plain lying at a high elevation; a table-land.
- Plaza**, an open square in a town [Spanish].
- Pole**, the end of the earth's axis of rotation.
- Political**, concerned with matters of government.
- Poncho**, a simple form of cloak worn by South American Indians.
- Power-house**, a house where electric power is produced by dynamos driven by means of water-turbines or of steam-engines.
- Prairie**, a wide grassy plain, either flat or rolling in surface.
- Preserves**, parks or other places where wild animals are protected.
- Promontory**, a lofty headland or cape.
- Puna**, a high bleak plateau, especially in the Peruvian Andes.
- Ranch**, a large stock farm or grazing ground for cattle, etc.
- Rajah**, a native prince or king in India.
- Ravine**, a narrow rocky valley cut out by a torrent.

- Reef**, a ridge of rocks lying at or near the surface of the sea ; also a vein of rock producing gold, etc.
- Relief**, the conditions of a land-surface as regards elevation ; the arrangement of high and low ground.
- Reservoir**, an artificial pond or tank for storing water.
- Rift Valley**, a valley formed by the cracking and sinking down of a part of the earth's crust.
- Rolling**, with lower and higher portions, like waves ; undulating.
- Roots**, a general name for plants cultivated for their underground parts, as carrots, beet, etc.
- Savanna**, a tract of level ground with low-growing vegetation [Spanish, "a meadow"].
- Schooner**, a small ship with two masts.
- Seivas**, wooded plains, especially in South America [Spanish].
- Shoal**, a shallow part of the sea ; also a great number of fishes swimming together.
- Silt**, fine mud, sand, etc., carried by running water.
- Sirocco**, a dry, hot, dust-laden wind ; originally, a wind which blows from the deserts of Northern Africa to Italy.
- Skerry**, a low, rocky islet, sometimes covered at high water.
- Soundings**, measurements of the depth of water.
- Southern Cross**, a group of stars in the southern hemisphere, shaped like a cross, which seems to revolve round the south pole, as the "Dipper" or "Plough" does round the north pole.
- Sporting**, shooting, fishing, etc., carried on for recreation or amusement.
- Steppe**, a level, treeless plain, especially in Russia.
- Stock**, animals kept on a farm—cattle, horses, etc. ; live stock.
- Stockade**, a strong fence made of upright posts.
- Stockyard**, enclosures into which cattle, etc., are driven for purposes of marketing, shipment, etc.
- Strait**, a narrow channel of the sea between two portions of land.
- Suburb**, an outlying part of a city.
- Surf**, waves breaking in foam on the shore.
- Temperate**, moderate in climate ; without extremes of heat or cold.
- Tepee**, an Indian tent or lodge.
- Terminus**, the extreme point of a railway line ; the end.
- Tide**, the regular daily rise and fall of the sea on the shore, caused mainly by the moon's attraction.
- Totem**, an animal or other natural object used as an emblem by an Indian family or tribe, and treated with superstitious respect.
- Trade Winds**, constant winds found on either side of the equator—N.E. on the north side, and S.E. on the south.
- Trans-continental**, crossing an entire continent.

- Trekking**, journeying by ox-wagon in South Africa [Dutch *trek* = drag].
- Tributary**, a river which flows into another.
- Tropical**, belonging to the region of the tropics; very hot.
- Tropics**, circles on either side of the equator, marking the places where the sun is vertical at midsummer (Tropio of Cancer) and midwinter (Tropio of Capricorn). Also, the zone lying between those two lines (torrid zone).
- Tundra**, barren, mossy, and often marshy plains, especially in Northern Russia and Siberia.
- Turbine**, a kind of water-wheel on a vertical axis; turbines of various patterns are also driven by steam.
- Typhoon**, a violent hurricane or cyclone, especially in the Chinese seas.
- Vapour**, the invisible gas into which water (or other liquid) is turned by heat.
- Veld** (= "field"), Dutch name in South Africa for grassy country without much timber.
- Vodka**, a strong spirit distilled from rye, much used in Russia.
- Volcano**, a hill or mountain with an opening into the interior of the earth, from which issue hot gases, dust, molten rock (lava), etc.
- Voyageur**, French name given to boatmen or canoe-men engaged in the fur trade, etc.
- Watering-place**, originally a place where people went to drink medicinal waters; now chiefly used for seaside bathing resorts.
- Watershed**, a ridge separating two slopes or river basins; a divide.
- Wharf**, a platform at the side of a harbour or river, where ships lie to be loaded or unloaded.
- Zone**, a belt or strip either running round the earth (temperate zone, etc.) or across some special area (forest zone, etc.).

THE END.



