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BY THE SAME AUTHOR

THROUGH THE SUN
IN
AN AIRSHIP

(Companion book to "The Stolen Planet")

LONDON

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"The Stolen Planet,"

A SCIENTIFIC ROMANCE,

— BY —

JOHN MASTIN, F.S.A. SCOT.,

F.L.S., F.C.S., F.R.A.S., F.R.M.S., R.B.A.;

Author of "The Immortal Light;" "The True Analysis of Milk;" "Parasites of Insects;"
"Plate-Culture and Staining of Amœbæ;" "Through the Sun in an Airship, &c. &c."

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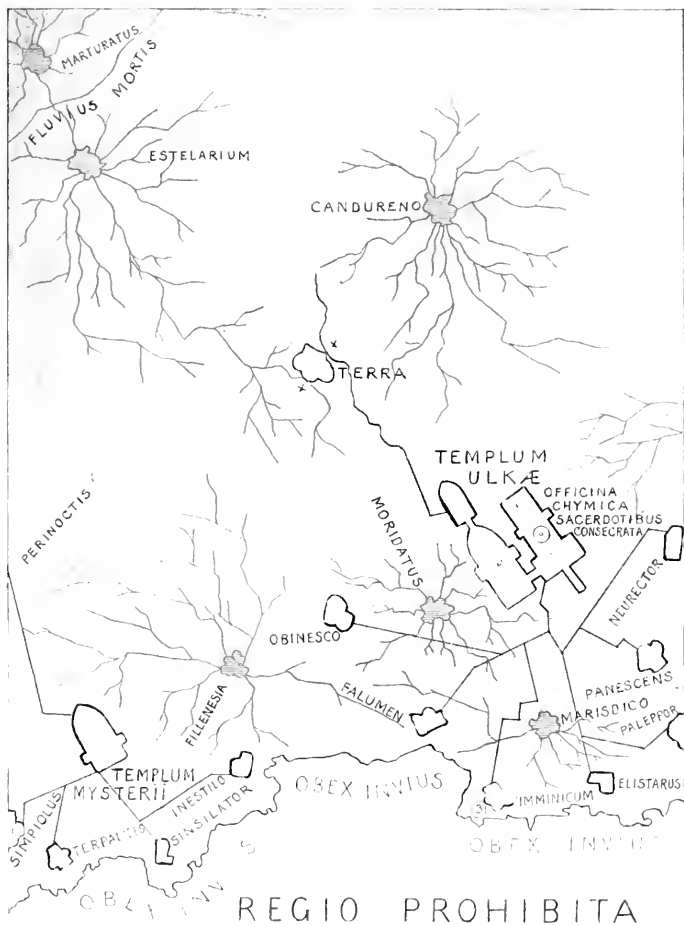
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THE IMMORTAL LIGHT

“ I will say to the north, Give up; and to the south,
Keep not back.”

Isaiah xliii. 6.





COPY OF MAP ENGRAVED ON A SHEET OF OPAQUE WHITE FLEXIBLE GLASS
 FOUND IN THE UNDERGROUND TEMPLE OF ULKA.

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JOHN MASTIN

F.L.S., F.C.S., F.R.M.S., R.B.A.

AUTHOR OF "THE STOLEN PLANET," "PARASITES OF INSECTS," "PLATE-CULTURE AND STAINING OF AMEBÆ," "THE TRUE ANALYSIS OF MILK," ETC.



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TO
ETHEL GWENDOLINE
LADY VINCENT
AS A SLIGHT MARK OF ADMIRATION
FOR HER UNTIRING ZEAL IN ALL MATTERS
POLITICAL AND PHILANTHROPICAL
THIS BOOK IS RESPECTFULLY
DEDICATED

TOTLEY BROOK,
NEAR SHEFFIELD, JULY 1907.

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Lest any reader should doubt the truth of the wonderful adventures related in the following pages, we hereby certify that this narrative is a true, unvarnished record of actual facts. As witness our hands—

William Norris

David Esdaile

Henry Belt

Anthony Trington.

} *Explorers.*

Witness,

Edward Carleton

Captain of the "Champion."

THE IMMORTAL LIGHT

CHAPTER I THE DEFENCE

“Narrow minds think nothing right that is above their own capacity.”—LA ROCHEFOUCAULD.

As one of the four who were sent in charge of an expedition fitted out by private enterprise in order to explore the Antarctic regions, I am asked to write an account of our wonderful and exciting adventures in that unknown land. The success of the expedition was mainly due to Esdaile's invention of self-heating steel which had made him famous a few years before ; in fact, it was chiefly because of this that the exploration was mooted, and the ship, the *Champion*, built, the possibility of success being practically assured from the start. Needless to say, the results exceeded our highest and most sanguine expectations.

What befell us in this little-known region was so thrilling and wonderful, that but for our

previous reputations and standing as scientists, and the marvellous instruments we brought back, people would have been utterly incredulous. In fact, so far as I am concerned, although I have never given the slightest cause for any one to doubt my veracity, yet when I gave a series of lectures on the subject and illustrated the same with lantern slides from photos taken on the spot, even several old friends remarked that it was really astonishing to see how naturally photographs could be made up to look as though taken from the actual place!

When I came to write the story in sober earnest, recording scientific facts in plain words, I thought it better to have the statements attested by my comrades. Therefore, when I had finished, I got them all to stay at my house for a few days, and the matter was gone into carefully and then duly certified as the plain truth; a copy of this document I give first, so that it may be read and remembered should doubts arise.

My name is Anthony Tissington; I am a botanist and man of science, and am so accustomed to looking at, and thinking of, everything in a plain, scientific, matter-of-fact way, that I

have no sentiment about anything except my beloved "flora," and therefore, to save future disappointment, I may say at the onset that I cannot write a novel nor do I write this narrative as an exciting, adventurous tale, or as a delineation of the characters of the persons concerned, but simply as a plain, ungarnished record of solid, serious fact. If I fail to please, or the reader say to himself that such a thing, or so and so, could have been related better, or more dramatically, I can only express my regret at my inability to gratify, and draw his attention to the saying that "facts are stubborn things"; and as it is useless to attempt to gather figs from thistles, so I suppose it is equally useless for me to try to do more than write, in plain and simple language, all that we passed through in that supposedly desolate, forsaken region, and so, with this explanation and apology, which I dare say few will read, I will proceed to my simple tale, taking the reader's friendly indulgence as already given.

CHAPTER II

THE S.S. *CHAMPION*

“There are few things more impressive to me than a ship.”—
RUSKIN.

MYSELF I have already introduced; the other leaders of the expedition were Henry Belt, astronomer, William Norris, geologist, and David Esdaile, a metallurgist. The first two are already well known in connection with their explorations in the Arctic regions, having made three successful journeys there together; they therefore need no further introduction. Esdaile, however, is new to the world as an explorer, although well known in scientific circles as one of the most expert metallurgists of the day, and the inventor of the particular alloy of steel and tin known as “Tynstele,” which has the remarkable property of retaining any desired heat from its own latent energy. He therefore merits a somewhat more lengthy introduction.

He was very fond of experimenting in alloys, especially in those metals difficult to amalgamate. Now it is apparently impossible to make certain metals combine with others, owing to

the great difference in their melting points ; thus tin melts at $232\cdot7^{\circ}$ Centigrade, and if heated much above that temperature forms the yellowish white powder of peroxide of tin, or the "putty powder" of commerce. The melting point of steel is about 1750 to 1800° Centigrade, according to its composition, from which it will be seen that these two metals can never alloy because the tin would cease to be metallic tin long before the steel had become even white hot.

Pure tin is not acted upon by the weather and retains its brightness, but steel soon becomes rusty owing to the formation of oxide. It occurred to Esdaile that if he could by any possible means get an alloy of these two metals, he would have the toughness and ductility of steel, with the tin's freedom from oxidation under the influence of moisture, and thus get a white, untarnishable steel of silvery appearance. He therefore made many experiments in order to obtain this seemingly impossible alloy. Whilst working at this, he also commenced experimenting with sulphuric acid, which is commercially made from iron pyrites, or sulphide of iron.

One day when in Derbyshire, at a small quarry near the village of Drybeck, he saw

there some brilliant red ironstone; obtaining a sample, he afterwards reduced the iron from it, but this would not yield sulphuric acid. He melted the iron, but no sulphurous fumes were given off; he therefore left it to cool. In a few hours it was still too hot to touch, and in a week's time was no cooler. He worked at this for some months, and finally reduced it to a definite formula; he found that when melted and treated in the ordinary way it was to all appearance good-quality iron, but when heated along with nitrate of soda, and oil of vitriol in a separate vessel, as if for the manufacture of sulphuric acid, (and no other treatment gave the same result,) it retained its heat while in atmospheric air. If this was then gradually mixed with the best crucible cast steel, made from Swedish iron bars heated to 1750° Centigrade, and in the proportion of one part iron to four steel, and when these had mixed, pure tin was thrown in, the latter seemed to volatilize and instantly disappear, but on being poured out into ingots, the whole was silvery white and never cooled below 60° Fahr. This steel was then made into blooms, bars, rods, and thin sheets, all of a beautiful, silvery, untarnishable whiteness, and being of the best quality of steel (self-hardening, man-

ganese, and other forms) could be used for everything, and never lost its heat, even in a refrigerator. Of course by increasing or reducing the proportion of iron when placing it in the liquid steel, a permanently higher or lower temperature could be given, but that of 60° Fahr. was decided upon as the standard.

Recognizing the value of this ironstone, Esdaile purchased the quarry, and was thus enabled to manufacture "Tynstele" to any extent.

The arrangements for the expedition had been left in our hands, and all being scientific and practical men, we did not fail to take advantage of anything and everything which might conduce to the success of the enterprise; and knowing the value of Esdaile's invention in so cold a region, it was utilized very ingeniously in the construction of the vessel. The inner casing or lining which formed the actual interior walls, etc., of the vessel was one of the most important features in the ship, consisting of strong plates of "Tynstele" riveted together, which alone kept the vessel at a comfortable temperature throughout, and the asbestos packing behind kept the heat from being lost. All the metallic parts of the vessel and the tools were made of "Tynstele," thus everything possessed a natural equable temperature, and

those who inhabited this ship would find it a very cosy home even if compelled to remain in it for any length of time.

Rigorous as is the extreme north, it is mild in comparison with the desolate, storm-riven region of the Antarctic Circle, the land of storms of terrific grandeur, awful in their results, which week after week continue with unabated fury. There the cold is so intense that no animals appear able to exist, as none have ever been seen; life is not possible on the land so far south. Therefore, although provision must be made for travelling on solid ground, yet ordinary sledges would be useless, for dogs could not be obtained there, nor could they be taken there and kept alive for any length of time, so we all put our heads together and devised a kind of motor-car-sledge, driven by superheated steam in a very novel and ingenious manner. As we had proved, "Tynstele" can be made to retain any degree of heat, so a series of coil-pipes was made of this steel to remain at a red heat, and water passed through these became instantly converted into steam. The coils did not foul or deteriorate, and, always remaining at the same heat, made a fire quite unnecessary. Further, in order to utilize the ice and snow for the supply, a tank

was provided of such a temperature as slowly melted the contents into liquid form.

Near the engines on this sledge ran a line of eight vertical shafts on either side; these could be instantly connected with the engines, when the vanes on them would rapidly revolve and so raise the car in the air to a height of twenty feet if necessary. At the bows was a snow-clearer, and a propeller at the stern; the runners were of the hardest manganese steel. The wheels were of wood pulp saturated with a mixture of hot shellac varnish and paraffin wax, and then highly compressed into solid segments, through each of which ran a rod containing a pneumatic slide at the point where it joined the hub, the whole forming a series of buffers to relieve the jolt when going over uneven ground. In addition to these each car was fitted with eight air-cushion buffers, which made effective resistors to shock, and the sledges could either travel on the runners when on level ground, or if too uneven for this, the axles could be automatically lowered, when the wheels would come below the runners and the sledge become a carriage. The tyres were of semi-circular section steel, and were as resilient as india-rubber pneumatic tyres, which latter would have cracked with the cold. The cars were made entirely of "Tynstele."

The stores were selected with excellent foresight, and were packed in very small compass, as almost everything had been cooked and then compressed hydraulically into "tabloid" or cube form, including fresh meat which had been boned, then dried by a process which retained all the nutriment, and afterwards tremendously compressed into solid cubes of half-inch face, which were light and easily carried about or stored. When one of these cubes was soaked in cold water for some little time, it absorbed the moisture, swelling out and becoming exactly like fresh meat, and, being already cooked, could be eaten cold, or re-cooked as a fresh joint, each cube providing a full, substantial meal for five hungry men. It was not necessary therefore to take any animals, as by these means fresh meat and vegetables would be always obtainable, and the scourge of the colder regions, scurvy, need not be feared, as the whole crew could live on the very best support exactly as if in a London restaurant. No canned meats or fruit had been allowed, and the stores were of course kept in a properly constructed refrigerator.

Our furs were completely lined with short and very thin strips of "Tynstele," beautifully tempered like a watch-spring and as thin, so

that even when we should be exposed to cold, almost too cold for life, we should still be enveloped from head to foot in a comfortable and healthy warmth, and in order to prevent frost-bite we had masks made of a non-inflammable material resembling celluloid, lined with a sheet of gauze like a lady's veil, also made of "Tynstele." As the strips on the clothing were small, and placed almost side by side, and the furs well ventilated, the wearers need have no fear of exposure, and would be able to move freely and even sleep on the ice without any other covering or protection; nor need we fear the tools burning our flesh with cold, as whatsoever was used would be warm.

The remainder of the outfit was of the ordinary character for arctic exploration, and needs no comment.

Everything being on board we embarked, and after a rather stormy voyage, arrived at the coast of Victoria Land—the supposed Southern Continent—and prepared to land and travel along the 170th Meridian of W. longitude the many miles which lay between us and the undiscovered country beyond the hitherto impenetrable ice barrier which we aspired, though perhaps vainly, to conquer.

CHAPTER III

STRUCK BY LIGHTNING

“From peak to peak, the rattling crags among
Leaps the live thunder.”

BYRON.

WE had encountered ice from the 40th parallel, and had been obliged to go far out of our course to avoid the immense floes and bergs; consequently, we approached Victoria Land from the west and hugged the coast till nearly opposite Mount Erebus, where we thought it advisable to land. In fact we could not do otherwise, as the sea beyond was so packed with ice that we should have been obliged to saw our way through. For some distance were high mountain ranges, 7,000 to 12,000 feet above sea level, of which Erebus was the most conspicuous, as it was then in a state of active eruption, belching forth flames and lava and continuous clouds of hot ashes.

“It’s a wonder where all that stuff comes from and where it goes to,” remarked the captain. “I remember the last time I came here he was pouring out lava in thousand-ton lots, and the coast appears unaltered in any way.”

“A tremendous quantity of stuff must have come out of it,” said Esdaile, “for I expect it has been going on like this since Sir James Ross discovered it during his expedition of 1839, and for long enough before that, no doubt.”

Just then Morgan, the first mate, brought the results of his dredging, as he had been asked to get some specimens of the sea bottom. These he now handed to Norris, who at once saw amongst them bits of granite, sandstone, and thin, laminated lumps of mica, proving the existence of actual rock, etc., near the ice barrier, thus confirming the work of the *Discovery*, which returned to England in September 1904, with the suggestion that this ice barrier of Ross's may be the foot of a tremendous glacier which covers the land or continent. This peculiar ice barrier was, we found out later, a characteristic feature of the region and was most remarkable in appearance. In some places, it rose to a height of 400 feet where it came straight out of the sea, but where there were rocks and steep, rocky cliffs, the ice would be, in places, only ten to fifteen feet high. The tops of all were flat, forming plateaux of vast extent, penetrating far into the interior and running along the coast in an

almost unbroken line. Even from our limited elevation, the land appeared chiefly volcanic, for many crater-like tops could be seen around.

As we stood at the rail looking over, we perceived some seals disporting themselves on a berg close by, and overhead several stormy petrels flew around the ship shrilly screaming. About a mile away a great whale came up to blow and then dived; the noise he made frightened the seals, which slid off the berg into the water, some silently, others giving a gentle flop, as of a flung stone. The petrels and penguins also disappeared, leaving a lonely stretch of desolate ice.

“I thought it was too cold for any form of life here,” said Belt to the captain.

“So far as I know,” he replied, “no animals can exist here except sea animals and fishes, and they come about March.”

“The temperature here is very remarkable; at certain times of the year it is much above freezing point, although that does not last long enough to have any appreciable effect on the ice,” said I. “I remember that Ross found layers of cold water sandwiched between warm ones, and also currents of warm, tropical water in various places.”

“Yes,” replied the captain, “it is a curious fact that at fifty degrees south the water at the bottom of the sea is roughly the same as the Indian and all other oceans. The return currents from the Indian, Pacific, and Atlantic Oceans run towards the south past America, Africa, and Australia, until they reach the latitude of about fifty degrees south, when they sink, and then flow at the bottom towards the north, to supply that lost by evaporation in the tropics, and towards the south to take the place of the cold water which there is moving north. This will account for the difference in temperature you mention.”

“We did not notice this alteration in our voyage here?” said Esdaile.

“Oh, yes!” replied the captain; “when we got to the 40th parallel the temperature was twenty degrees below zero, but at the 50th parallel it had risen to twenty-eight degrees. At the 60th the temperature was thirty-eight degrees, and yet the sea was not free from ice; at the 65th parallel it again fell far below the freezing point of sea water, and just now the temperature is -63° Fahr., and if we were for a moment unprotected we should be frozen immovable with lightning speed, and a mercury

thermometer if exposed would soon be solid as a bar of iron."

After a little more conversation we decided to send up the balloon the next day, and then turned in so as to take a good, long rest before beginning our arduous tasks, as we were exceedingly anxious to proceed as far as possible during the long period of light, before the still longer winter which was just closing again set in. Accordingly, the following day we began our preparations for the ascent, hoping to be able to see over the distant inland ice barrier, and perchance find some place where it could be penetrated. We had brought with us a great quantity of hydrogen which had been compressed into solid bars for convenience of storing; a few of these bars were placed on a hot plate of "Tynstele," under which was a thick sheet of asbestos to insulate it from the cold, and these were placed near the mouth of the balloon, so that the gas in expanding gradually distended the silk until the car was tugging at the hooks. A captive rope was now attached, the hooks unfastened, and slowly the balloon ascended, pulling hard at the rope as it was paid out at the windlass. Up we went to a great height until we felt that the rope had

sufficient strain on it, when the signal was given to stop. We now searched the horizon with our powerful glasses, and some distance ahead landwards could be seen the inside of several craters, active and extinct, and far away was that great impassable barrier of ice, stretching high above the land, with mountain after mountain of glittering white, rising up so straight and sudden that apparently no human being could ever mount them, even if it were possible to traverse the terrible space between, which was, in itself, a barrier of great bergs, precipices, and awful cracks, evidently caused by volcanic action, which it seemed impossible for any human being to span, unless perchance by such means as we had at our disposal.

The whole of the horizon seemed one mass of desolate snow and ice, we ourselves being the only living objects within sight. We took some photographs, and whilst these were in progress a report like a pistol-shot was heard from below, instantly followed by a twang on our rope. Looking over the side, what was our dismay to see that the rope was broken half across, for the men had made a mistake, unnoticed until too late, and had attached an ordinary rope to the balloon instead of one

made of strands of fine "Tynstele" wire, which was extremely flexible and exceedingly strong, all our rigging being made of these ropes as they could never become frozen or stiff.

We at once telephoned to be hauled in, but Carleton, the captain, told us to let out the gas as the rope had frozen into a rod as hard and unyielding as a hammer-shaft. It was brittle as glass and would have to be thawed inch by inch as it was hauled in, lest it should snap off like a carrot in being bent round the drum of the windlass. We pulled at the valve rope, but it refused to act, and then all of us swung on it and—it broke, tumbling us into the bottom of the car. We were now in an awful plight, for the rope was slowly parting strand by strand, and the balloon was tugging jerkily at it with tremendous force; unless we could liberate the gas, we should be loose in a few minutes and drift away, without food or protection, to certain death.

"Let us open the silk," said Belt, "and split the thing up."

"If we do," said Norris, "we shall ruin it. I am going up to the top," and before any one could stop him, he had climbed up the net like a sailor to perform a feat of reckless heroism

and daring, which was greeted with cheers from below. Clad in his furs as he was, he went up and up the netting, now hard as iron wire ; in a few minutes he was away from the car, hanging over space with his back to the ground like a fly on a ceiling, threading his hands and feet in the broad mesh as he progressed inch by inch up the bellying surface. Now his head disappeared over the roundness of the envelope, then his shoulders, then his body, and last of all his feet, and we lost sight of him. We could not speak to each other, and endured an eternity of suspense, every moment expecting to see his body fall past us, to be dashed to pieces on the rough and broken ice below. All the crew had turned out to watch this sacrifice of life, as they thought, and they were looking with strained, upturned faces at the brave man whom they could see slowly crawling to the valve doors far over our heads. We were just going to rip open the silk when we heard the rush of escaping gas, and the dreadful tearing and tugging ceased. What exactly happened we learned later ; Norris had reached the doors to find it impossible to get them open, owing to the spring catch and great pressure of gas inside holding them securely

together. He feared to slit the silk there lest the sudden release of pressure should cause it to open right across and collapse, thus precipitating its occupants to the ice below like stones ; however, there seemed nothing else for it, and he was on the point of drawing his knife to make the fatal incision and risk the consequences, when he thought he might reach the valve catch with his feet, and so this hero took a good grip of the netting, lay full length across the opening of the doors, and giving a vigorous kick, broke the spring catch ; his weight being at the junction of the doors, caused them to open. Luckily his head was outside, or he would have been instantly asphyxiated, for the doors slowly opened more and more under his weight till he was nearly upright, with his body from the waist downwards inside the balloon, where he fortunately became wedged between the folding doors. This relieved the weight from his hands, and so he stretched his head away from the opening as much as possible, whilst the gas poured out in suffocating volume, and it was in this position he was found, more dead than alive, when the balloon came to the ground. The captain down below, seeing him stretched across the

top apparently unconscious, sent six or eight heavy rifle shots completely through the balloon. These holes considerably accelerated the descent, and the balloon fell much quicker than the rope could be thawed and wound in, and this being like a steel bar, took a circular sweep as the car descended, till it caught in the rigging of the vessel and the car danced up and down as the now half-emptied balloon swayed and bobbed as it slowly collapsed. Finally the rope parted where it had previously broken, and the car fell about fourteen feet, throwing all three of us on the ice. Relieved of our weight the balloon now rose slightly, and began to bump and tumble along the ground in a sickening manner, until it was caught and relieved of its living but unconscious burden. Artificial respiration was resorted to, and in a short time Norris came round, to completely recover in a few days, at which we were very thankful, for his noble and successful effort to save our lives had moved us considerably.

Whilst he was still ill an accident happened which proved of great service to us, although it was only by a mere chance that we were not completely destroyed, for without any warning a large berg close by the ship turned over, and

the immense weight of ice below the surface of the water, catching under the keel of the *Champion*, lifted the vessel up bodily and flung it on the land, as easily as a tennis ball is shot from a racquet, depositing it on the side of the cliff in a V-shaped hollow between two rocks, where it wedged itself firmly, fortunately for us on an almost even keel, as in a dry dock. Many of the timbers of the outer shell had been split, but the damage was only such as could be repaired. The situation had its advantages, as we were protected from the danger of being "nipped" between approaching bergs, although we could not now continue the journey by sea unless we blasted the rock to liberate the vessel, which would have to be done sooner or later in order to return, and would be attended with no small risk to the ship. However, the launching of the vessel was not a question to trouble about at the moment, so we began instead to prepare for continuing our journey on land, so that we could start immediately. Norris was fit to travel.

Before we could get the sledges from the hold and fit them up, we were stopped for some weeks by the weather. The sky became dull and lowering, great banks of cloud came up

from the west, so Carleton quickly made the vessel as snug as possible, telling us we were going to have a taste of a real Antarctic storm ; nor was he mistaken, for very soon there came a lurid light creeping along the horizon, and this was immediately followed by a blast of biting wind, and hailstones falling with the force and feel of bullets. In a few moments the air was full of blinding snow and hail ; the wind rose, shrieking in the shrouds like mad fiends, and driving the hailstones before it in solid masses which, falling on deck in one continuous pelt, sounded like the rattle of artillery. It was impossible to stand against it, and one of the men who had been delayed with the tying of a hal-yard, was flung across the deck to the companion with great force, but thanks to his furs, he only sustained a few bruises.

Day after day the storm continued, gathering in intensity till the whole of Nature seemed to be united in one furious and mighty effort of destruction ; peal after peal of thunder followed in such rapid succession that the earth trembled with the reverberation of the deafening crashes. Many a berg, shaken to its foundation by the continued vibration, split and came crashing down to earth or sea, adding its noise to the

thunders of the heavens, and all this time the lightning played about the ship in blinding flashes, lighting up the darkened sky with an awful glare. The storm tape had been cast down the face of the cliff, with the ball, in the sea through a large crack in the ice; one vivid flash of lightning struck the vessel in two places at once, and for about the space of a second our good ship looked like a meteor, being completely enveloped in a ghastly blue flame, whilst from every projecting point shot out spears and arrows of light,—a sea of St. Elmo's fire—and then the flexible copper tape absorbed it and it flashed over the side like a fiery serpent, and, running over, split the ice, and the solid floe opened out as if sawn asunder; then it reached the ball, which must have been resting on ice far below, for almost at the same instant there was a muffled roar, thousands of tons of water and ice were thrown into the air in all directions, and there, some fifty yards away, where but a moment ago had been a sea of ice, was now a seething froth of foaming water, with large blocks of ice bobbing and tumbling in the turbulation. A few minutes afterwards all was compact again, with the insulating tape embedded in the ice.

On deck the wind and the hail were terrible, so severe that the strongest could not have stood against them ; momentarily we were expecting the support of our friendly rock to be destroyed, but the vertical wall which rose to over four hundred feet at the far side, and the rock in front, saved us from the fury of the gale to a great extent. When we were thrown on this cliff we thought it a calamity, but to this we owed our safety, or, long before the storm had abated, our boat would have been cracked like a nut between the closing and tumbling ice, or blown to pieces by the wind.

CHAPTER IV

ON THE TOP OF A LIVE VOLCANO

“Beneath I saw a lake of burning fire,
With tempest toss'd perpetually.”

POLLOK.

GRADUALLY the storm abated, and with the welcome return of calm weather we were able to complete our preparations for the land journey, and our sledges were stored with provisions for a lengthened absence from the ship. Each of the sledges was fitted up with food, implements, etc., so that should they be separated the occupants could look after themselves independently of the others. Thus the crew of forty were divided into five sections of eight each. Two sections, with one sledge, were left to look after the ship and to gather samples of water, dredgings, etc., in charge of Morgan, the first mate, the remainder going with the three sledges. In order that we could all be in communication, each section was provided with a specially designed wireless telephonic apparatus, all being set in unison. These were wonderfully simple, consisting of the ordinary well-known transmitter

and receiver, as universally used;—a dry battery was placed inside the instrument instead of the usual Leclanché—and was for making calls only. Instead of wires, one terminal was attached to a covered flexible copper cord, the other terminal was free, so that the ether waves connected the terminal with that of any other similar instrument set in unison. When speech was required, a ring would cause the user at every other instrument to listen, provided his wire was connected to earth. These could be used at the other end of the world if necessary, for water being a conductor, and much electricity present in the sea, the water would connect land to land and so transmit messages to all instruments set in unison, the world over. The matter was simplicity itself and acted splendidly; the sledges, being made of steel throughout, were in constant circuit with the ground, so that it only remained for us to see that the bared part of the earth-wire always touched some part of its surface, while those in the ship had to take care that such exposed portion of the wire rested in the sea, or on the ground. Thus it will be seen that all five parties could be in communication with each other as easily as if in one house, and

one turn of the handle would ring all the bells and bring some ear to each receiver. As will be understood, our invention could not be used privately, as any one at any instrument in unison could hear, so that, when one was rung up, all were rung up also, and all heard the message. We had not perfected this sufficiently to be of public commercial value, although for our purpose it was an advantage to communicate with all simultaneously.

When all was ready, with a hearty leave-taking of the contingent in the ship, our three parties started on our perilous journey still farther south.

We got on very well till we reached Mount Erebus, where we stopped to attempt the ascent. This was exceedingly difficult, as the wind was shifty, and blew the sulphurous vapour in clouds of stifling smoke in which we were constantly enveloped. Some little distance farther on, Carleton found an easier ascent, so all of us gradually made our way to the spot, and by a good deal of scrambling and tumbling, we slowly progressed towards the summit. The volcano kept throwing up hot ashes and lava, which occasionally fell amongst us and required no little dodging. As we climbed nearer the

top, the snow and ice ceased and the ground became slippery and dangerous, caused, no doubt, by the condensing steam and heat forming a wet slime of moisture on the rock and lava-covered surface of the ground. Added to this danger were the cracks and fissures in the mountain through which in places oozed white-hot lava, as liquid as water, but so intense was the cold that, after flowing a few inches, it was as thick as syrup, and in still other few inches became slimy and crusted over. Through other fissures issued blue, sulphurous flame and smoke, curling up in endless rings till met by the descending fumes, where they formed strata of unbreathable gas, as if each were trying to overcome the other. With much coughing, spluttering, and holding of breaths, we passed this and then found that in places the ground was very thin, and the utmost care was needed lest our weight should cause us to sink into the furnace raging below. Every step had to be well chosen and tested before proceeding, and after several days of toil we reached the summit, where we all lay down quite exhausted, the last portion having been very fatiguing. We were much surprised at being able to breathe so freely, and after resting a while, we

made our way to the mouth of the crater, and, seeking a position free from smoke, looked down what seemed like the fiery gullet of a demon. At the top, or lips, all was black and smoke-begrimed, but a few feet below this the inside became a shade lighter, and thus it changed almost imperceptibly into browns and purples and blues until, about half-way down, the colour became rosy red. Nothing was visible below this, as dense masses of smoke, like billows of rose-tinted wool, were rolling and seething from side to side, now coming upward, now sinking back again, then slowly gathering from side to side like milk on the boil, remaining tranquil for a few seconds and then rapidly mounting up the crater with an irresistible rush, boiling and seething as it came, and as it mounted upwards it became somewhat tinted with the local colour of the crater, first white, then pale rose-colour, then cherry red, and then the crater itself became brighter with the reflection of the liquid mass, which was a very pale red, or orange.

We all stood fascinated by the sight, not thinking of our danger, and still lava came up swiftly and strong, until it reached the top and welled over in a fiery flood, at the same

time throwing upwards clouds of white-hot ashes and cinders which seemed to fly out of the liquid like fireworks. All ran back to the higher ground in panic, with the flood of red-hot lava at our heels.

Down the outside of the crater it fell like a waterfall, but of fire, at least three feet deep, pouring over the edge like golden oil, and immediately the edge was passed, breaking and tumbling into millions of splashing fireworks. The effect was appallingly awful, and all noticed—with a shudder—that tons and tons of this liquid fire were pouring down the very place at which we had ascended, and this would, of course, have been flooding over us had we been but four hours later. Still it flowed on, first red, then rose-colour, and as the lower and still hotter portion was thrown out, the colour became pale orange, and lastly, dazzling white. For several hours it continued to flow on at this white heat, and in the meantime the air had become dry and stifling; over the mountain the thunder and lightning flashed and played continuously, and as we were still watching, in a moment there came a terrific crash, making the whole volcano shake as though attempting to cast us down its awful

throat, and the white-hot lava, half-a-mile from where we were standing, suddenly leaped into the air and then vanished. What had happened? We ventured a little nearer and saw that the great heat of the lava, or the pressure, had broken off a mass about one hundred feet deep from one side of the crater, and this had gone tumbling down the mountain side, splashing and being splashed by the liquid fire, leaving a wide cleft or spout in the side of the crater through which the lava now ran in an awful torrent. This deep outlet reduced the level very perceptibly, and it soon ceased to overflow. In half-an-hour the bed of lava between us and the crater was hard, and a little later cool enough to walk upon without injury, so we cautiously advanced and again looked into the pit of liquid fire. The force had evidently spent itself, for the liquid would well up almost to the base of the gap, then rush back somewhat cooled, to mix with that below with a hissing roar, and be again heated to a dazzling white and again thrown up. Thus it continued, becoming less and less strong till nothing could be seen at the bottom but a gigantic furnace of boiling, blinding whiteness. Down this went, lower and lower, as if sinking into the very

heart of the earth, when, with the speed of a cannon ball, up came a shower of hot stones and ashes, and the gases exploding and taking fire produced a succession of nerve-shaking reports and flashes which were very terrifying.

We had now seen almost more than we cared for, and the question of getting down began to absorb our attention very seriously. Perilous as the ascent had been, the descent was more so, and we all felt we should be very glad if we went down that twelve thousand odd feet in safety. The places where slopes had been were now ploughed-up masses of stone and dangerous declivities of vertical walls of rock, and where had been friendly ledges on precipitous sides, was now filled up with lava as smooth as glass, with no possible foothold. So difficult were such places to negotiate, that many times, in order to pass some awkward spot, we were obliged to go miles out of the direction and return by another way, after hours of stiff climbing to find ourselves but a few yards lower than before.

Thus, yard by yard, was that terrible descent accomplished, and we finally found ourselves, tired, footsore, and bruised, on the somewhat level base where the three sledges had been

left. We had been away about a fortnight, and had had very little sleep during that time, so, thoroughly wearied out, we entered our respective sledges and slept hard and long. Whilst we were asleep another storm came on, but so weary were we that the crashes of thunder even were unnoticed by most of us, except as mingling in our dreams as but the thunder and rumbling of the volcano. When we awoke, we were snowed up; the heat from ourselves and the sledges, however, had melted a wide space round us. The sledges had been placed side by side for additional warmth, and for twenty feet around and above, there was an empty space like a vault, the snow in a straight wall rising high above us, with an arched roof. We had a good meal and slept again and then woke for another good meal, by which time we were thoroughly rested and recovered, ready for a further advance.

We tried to dig a way out, but the snow was too deep, so we set our engines going and moved slowly forward, using our snow-shifters. In an hour or so we came to open country where the snow was still fairly deep, but on looking back we saw that we had been in an enormous drift.

CHAPTER V

LOST IN A CRATER

“All that mighty heart is lying still.”

WORDSWORTH.

FINDING the ground in this inhospitable region too rough for sledging, we lowered our wheels and went bumping along at a pace which proved the excellence of the construction and adaptability of the sledges for what was required of them.

Before leaving the ship we had arranged that however often we should speak with each other, at a certain hour once each day communication should be made between all parties without fail, and as the days sped on and this hour arrived, we gave the exact route and distance travelled and direction of the next day's journey, ascertaining that all hands were well and in good spirits. As we journeyed farther, the difficulties became greater and the country wilder, bleaker, and more storm-riven, and the ground so broken and rocky that the wheels were useless. We now used the vanes and propellers, rising to about fifteen feet above the ground, steering

round bergs and prominences without mishap, and settled down at the foot of Mount Terror (discovered by Sir James Ross in command of the *Erebus* and *Terror*, 1839-41), which reared its noble slopes to a height of over 10,000 feet. We were desirous of examining the interior of this extinct volcano, but on our talking it over with Carleton, he thought it advisable to take only a few of the men, as the experience we had had on Erebus with so large a party had added considerably to our difficulties. It was therefore decided that we four should go, accompanied by six of the men, as we were anxious to explore the crater, even if this necessitated a stay of some days inside it. Acting on the wise principle of having considerably more food than was necessary, we took sufficient to last us a fortnight, each as usual carrying his own. We then commenced our climb, leaving the rest of the party with the sledges at the foot, in the shelter of a large opening of one of the rocks, in which they were to wait till our return ; Carleton deciding to stay with them, having slightly injured his foot.

It is not necessary to describe our arduous journey, which was very similar to that up Mount Erebus, except that here the snow and

ice continued to the very top. We had ascended on the south side, and on reaching the summit found it bleak and severe in the extreme, for we caught the full blast of a gale of wind which had sprung up during our ascent, unnoticed by us in the shelter of the mountain, as it was blowing towards the south, which is usual in these latitudes. So cold was the wind that had it not been for our warm clothing we should have been frozen to death. We were now at about the 179th parallel, and there before us, hidden by that awful barrier of ice, lay the unexplored region of the Pole. We stood looking on the surrounding country, which was bathed in brilliant sunshine, and after taking some photographs, discussed the prospects and probabilities before us. Beyond a comparatively few miles, farther south no man had ever trod; the terrible storms, severe cold, difficulties of food, warmth, and clothing, and lack of means of travelling, had so far prevented man from penetrating very much farther than where we now stood. Should we be allowed to cross the barrier? The question of food, warmth, and clothing had been solved, and even that of transit to a great extent, but when we journeyed farther, should we be as others? or

perhaps only be permitted to go just a little more and then, like all who tried to penetrate hidden mysteries, be stopped by that unclimbable, impenetrable obstacle, as impassable as if a mighty power stood beyond and said, "Thus far shalt thou come and no farther." All this was in the veiled future; but as we talked, the feeling of a great resolve came over us, and we made a compact together that we would conquer this relentless ice-foe, or die in the attempt, and that come weal or woe we would stand or fall together. Then we gave our attention to the examination of the crater, telling the six seamen to stay at the top and interpret any message sent from the captain, who could be distinctly seen with the glass. Looking inwards the crater went down like a deep bowl; so gentle was the slope that many enormous rocks remained supported on the ice instead of rolling down to the bottom, as one might have thought. We started the descent, walking very carefully, tapping and probing at every step, lest the snow should conceal dangerous hollows. Here and there enormous pieces of rock had been torn from the sides by their own weight, or imperfect balance, and had ploughed deep courses in their descent,

thus giving evidence of their weight and power, and leaving the same mighty seal in the holes where they had been partly embedded. There were many of these holes, forming shallow caves, whilst the bottom of the crater far below was filled with the tremendous pieces of rock, some of which were bare and others covered with snow, under which their size could be seen to be enormous.

We had not descended more than one-third of the distance when we heard a call from above, and on looking up, one of the men shouted to us that a hailstorm was rapidly approaching, but scarcely had we turned back when they were all hidden from sight by a blinding deluge of hailstones, which rolled down the side of the crater and pelted us with great force. There being a shallow cave or recess at hand, we stepped into it, and it proved an excellent shelter. Outside nothing could be seen but a sheet of hail which obliterated everything, even the opposite slope.

We made ourselves as comfortable as possible, wondering how long we should be in duration, when all at once Norris, who had been idly scraping at the earth with his spike-shod staff, or alpenstock, energetically exclaimed,

“Look here, Esdaile, here is cobalt, as certain as fate;” and there, sure enough, underlying the rough slip earth, were large slabs of the greyish, brittle metal, cobalt.

Esdaile examined it carefully, and said, “Here is wealth indeed, if we could but take it away.”

“Would it not cost more to refine it than the thing is worth?” I asked.

“This needs no refining,” said Esdaile. “So far it has been very difficult to obtain cobalt in a pure state, as it usually occurs in the same ores as nickel, and it is an exceedingly difficult task to separate the two metals, but here it is pure, and in tons.”

This was an exciting find, and on clearing the earth away we found we were standing on a slab of cobalt as big as a paving-stone. This was rough and torn, and probably the whole rock that had been attached to it was pure metallic cobalt,—Norris said he would swear it was. In our eagerness we forgot all about the rattling hailstorm raging a few feet away, and inserted the steel points of our stocks under the edge of the slab and, giving a great heave all together, got one end partly up and saw that it was about eighteen inches thick, all solid metal, when it slid back again, too heavy for our poor leverage. We tried it again, and just

as Belt got his stock under it the whole floor gave way, and down we dropped all in a heap on to something solid, and then slid down an inclined hole for a great distance, finally pulling up, after another big drop, against a mass of earth. The light from a match showed nothing more than a hole, which must have been a kind of shaft, or vent, through which the gases had escaped in the time of the volcano's activity. There was no other way out, so we tried to climb up, but the sides were rock and the inclined earthy vent down which we had slid was far too high to reach ; we were also badly bruised, and Norris had severely hurt his wrist, either by falling on it or catching it somewhere. There was not even a glimmer of light, and from the distance we had fallen we must have been a long way below the bottom of the crater, or what we had supposed was the bottom. We were unable to find a foothold anywhere, although we tried till we were weary and exhausted ; so we sat down to rest, as effectually caged as in a trap, and without any apparent means of exit or communication with our friends outside.

“ It is getting warm,” remarked Belt, at the same time sliding his mask into his hood.

“ So it is,” agreed Norris, following his

example ; “ but it is strange the air is so fresh and sweet ; I should have thought that in this hole, closed up as it was, the air would have been deadly.”

“ Where can it come from ? ” said I. “ Shall we see which way it blows a flame ? ”

So we tried a match at a time in various places, and in the rocky wall, nearly at the bottom, by the crevices of several slabs of metallic cobalt, the flame was wafted aside, drawn inwards—so the air passed out there. Economizing light, although each had a box of matches, we felt round for our stocks, and inserting them in the cracks and fissures, the earth all round was cut away and the slab pulled back. A great hole was revealed, which the light from another match showed partly blocked up. We scrambled through and could now feel a perceptible current of warm air, and it was quite evident we were either nearing the source of some volcanic heat, or else the extreme cold above kept the natural heat of the ground from escaping, and so it remained comparatively warm, and also gently warmed the air passing through it. On and on we went for several hours, when we called a halt and, sitting down close together, talked over the situation.

CHAPTER VI

A LEAP IN THE DARK

“And in the scales on either hand
Sat life, and death—in equipoise.”

GIRANOLI.

ON looking at a pocket compass, we appeared to be going due south, but it was now getting warmer, and already our “Tynstele”-lined furs felt uncomfortably hot and heavy. Each sat thinking, and after a few seconds I said—

“Do you hear anything? I fancy I can hear running water.”

We all listened intently, and could hear a faint sound of water some distance off; we now started again, and as we continued our journey, the sound became more and more distinct, till we at last came to a swiftly flowing river.

“Now,” said Belt, “how are we to cross this; or tell how wide it is?”

“That is the difficulty,” said Norris; “I fear it is both swift and deep. I have seen a good number of these subterranean rivers, and this flows as fast as a mill-race.”

I put my stock in, but it went deep down and the current ran so fast, that I could not

hold the stick straight down, even with both hands. We flung in a heavy stone, but so strong was the stream that we distinctly saw it fall flat on the water and swept almost across the tunnel before it began to sink.

“No one can swim that stream,” said Esdaile, “but we must cross it if possible, or die here. You hold me, Tony, and I’ll try to stretch across.”

With that I gripped him by his hand and wrist, and the others held me, when he stretched across with his stick, which fortunately touched the farther bank; considering the length of the stick, which was six feet, the stream would be about seven feet wide, so that it was possible to jump across with a run.

“It will be a dangerous jump to take,” said Belt; “it would be bad enough in the daylight, knowing the bank at both sides, but in this narrow passage, where one can scarcely stand upright, it is no joke to jump over that flowing death on to something no one knows what.”

“I am afraid it will be a bit tricky,” said Norris. “Let us make a good light and we may perhaps see the other side; we can feel it with the stick, but how are we to tell if it is the far bank or merely a rock in the middle

of the stream, or even if there is an opening at all beyond?"

"It is more than probable," said I, "that the passage ends where we are; you remember the lights have all been drawn inwards, and this may have been caused by the suction on the air by this very stream in its swift rush past the opening."

"That is a point, certainly," said Esdaile; "the first one across may reach safety, but my own idea is that it is but a rock in the middle of the stream, for there is empty space above and at each side, and my opinion is that we shall alight on a slip of rock and go bounding into the stream at the other side, or else go smash into a blank wall of earth, or rock, and into oblivion in either case."

Now we had a quarrel as to who should go first; each insisted on trying it, but none would give way, or agree to lots, so matters were at a deadlock, but to stay where we were would eventually mean death; the same result would follow going back, or attempting to swim the stream, and so we again tried with our sticks from all points, to find that in only eighteen inches or so was there anything to be felt on the opposite side of the river. Could we, in a

running jump, in the dark and bent nearly double, gauge to a nicety eighteen inches of rock, the height of which could not now be ascertained, and this across seven feet of black water, flowing with irresistible strength and rapidity? It had to be tried, however, and then began another quarrel. Norris insisted on going, but he had risked his life for us in the balloon, and we were all fully determined he should not do it again. I insisted, because I was a good athlete, but all the others objected; I opposed all the rest, and so it went on all round. At last we agreed to draw lots, refusing to let Norris join in it, which made him very angry, but we all positively declined to do anything if he risked being drawn. Then he became sarcastic, and said it was a pity we had not brought with us his feeding-bottle, or a glass case to put him in, but we drew lots without him, and the lot fell upon Belt.

We had each brought a rope, to assist us in climbing the mountain, and after we had stripped, one of these was tied round Belt's waist, the other end being held by two of us, standing at the water's edge, thus giving him plenty of slack. He tied a box of matches on

his head and then said he was ready; Norris held several lighted matches aloft, whilst Belt gauged the position of the rock, time after time going backwards and forwards to be sure of the exact direction, and then with a "Good-bye, all," the final run was taken. No one saw what happened, but there was a splash, and the rope dragged taut; in a moment, just as we were commencing to pull back what we feared would be our drowning comrade, there came a shout—

"I've got it! I'm all right; the passage continues here at this side."

The slack of the rope, which had fallen into the water and had been instantly carried away, was dragged straight, and a few seconds after we could see Belt at the other side holding a light, which plainly showed the mouth of the continuing tunnel. Between rushed the racing stream, terrible in its blackness, with the feeble, flickering-light across its surface. Norris and I then passed over, and Esdaile made a big bundle of our clothing, etc., and we jerked it across; then he followed, landing safely amongst us. Thus we had performed a series of athletic feats under the instinct of self-preservation, which would scarcely have been possible

otherwise. We now dressed, but as the air was so warm we strapped our furs in a bundle, and then, feeling the reaction after all our excitement, we decided to stay here and take advantage of the water to prepare a meal. We carefully wrapped a cube of beef and a tablet of potatoes in a large cloth with which we were provided for the purpose, and tied this securely to the rope, throwing the bundle into the stream for the food to soften and swell. Meanwhile we sat down; most of us fell sound asleep, at least *I* did, but the others only confessed to having "just dropped off." Hauling the food back, we made an excellent meal, though a cold one, and then, much refreshed, recommenced the journey, wondering what it would lead to. We were going along carefully in the dark, as our matches were precious, when Esdaile suddenly exclaimed—

"I thought I felt some one pass me. Was it one of you?"

We all said "No"; but Norris said, "I also thought some one passed me."

"There!" said I, "some one has passed me now. We are not alone;" and I struck a match, but the light revealed ourselves and our black shadows only.

"It is very strange," said Belt; "I am sure there is somebody about, I can feel their presence!"

So could we all, but nothing was visible, although we all had the feeling that we were passing through crowds of people and were being watched. We felt about, and kept saying, "Now I have you!" to find it was but one of ourselves. This sensation of strange presences grew stronger as we proceeded.

"This is a bit uncanny," said Esdaile. "The place is weird enough, and mystery does not improve matters."

"It is just as though we had actually crossed the dark, swift stream of death," Belt remarked, "and immediately on reaching the other side, entered the abode of the shades, who would, of course, be invisible to mortal sight."

"That is poetic, anyway," said I; "but this goes beyond sentiment. I do not believe in shades myself, but no one can doubt that there is life about us."

This impression continued, but there was nothing for it but to proceed; we had roped ourselves together lest we should become separated, for the tunnel had taken so many turns, and had been crossed by so many other

tunnels, that we had to confess ourselves hopelessly lost. At the start, we each had a box of matches, but all had been used except one boxful, therefore we dared not use these for lighting our path, or they would have been used up in an hour, so we went blundering on the rough and heavy way, first upward, then descending, till we were bewildered. Even the compass was no good, for we found that some of the rocks at the side were magnetic, and deflected the needle so much as to prove it quite unreliable. We had crossed the river and started the journey in a spirit of reckless daring, and bitterly regretted we had not waited, for now, when too late, we felt certain that search would be made for us, as the sailors would probably have seen where we had sheltered. Time after time we turned back, to find we were in a cul-de-sac, so that we had now lost all idea of direction and had no alternative but to proceed along the tunnel to wherever it might take us.

We travelled on for some days, coming across many springs, which always abound in the interior of the earth, and in these we prepared our food, but in spite of our having plenty, we were becoming terribly exhausted,

both in mind and body, but suddenly, to our intense relief, the passage opened out and we found ourselves in a large cavern. There was a faint, glimmering light from one point, which was very pleasant to see after groping in the dark so long, though we could discern very little by its feeble ray, except that we seemed to have descended into a graveyard, or underground cemetery, for there were many apparent tombstones lying about. We struck a light, and found that what we had taken to be tombstones were masses of lava, and, looking up in the direction of the glimmering light, we saw innumerable stars in the sky, high above, but the dark rock all around was so smooth, and shelved inwards so much, narrowing as it approached the top—an immense distance above—that only a fly could have climbed it. Norris at once pronounced it the empty crater of an extinct volcano, and remarked on our luck in descending into this, instead of into the open arms of an active one. He said that the passage we had come down was therefore only an air-shaft of this volcano, communicating underground with the crater of Mount Terror, and the many openings with which the crater abounded were merely vent holes through

which the lava had been tapped from various places in the earth, all culminating in the chamber where we stood, from which the volume of liquid fire would be thrown up out of the crater above. The compass was still useless ; in fact it pointed north in five different directions ; our watches were also magnetized and had stopped, so that we were in a double plight, knowing neither time nor direction. We traversed various passages, sometimes for what seemed hours, only to meet choking, sulphurous fumes, which drove us back to the cavern, and it seemed as if we had now reached our last resting-place. It was quite evident we were near some volcanic matter, which was not sufficiently great in volume to well into the drains, or channels, and so forward into the crater.

Many days were spent in wandering about, trying to find a way out, and our stock of food was now perilously low. One meal a day was all we allowed ourselves, but in the darkness, without knowledge of time, we feared we were exceeding this limit, so that we must find a way out somehow, and soon, or face death by starvation. At last, in searching along the many passages, we entered one where the roof had fallen

in, blocking the way farther, but before the matchlight failed, something in the nature of the soil struck Norris as familiar. He took a handful of it, and lighting another match said—

“Look here, Tony, this looks like that edible earth we saw those Russians feeding on and ate of ourselves. Don't you think so?”

I took some, and even in the hurried glance saw there was no mistake, and replied, “Yes, I am quite sure of it,” then, turning to the others, continued, “When Norris and I were travelling in Northern Russia some years ago, we were without food and, coming to a small village, found the peasants also without, but they were eating a kind of earth called *rock flour*, and this is the same.”

“How do we eat it?” asked Esdaile.

“It is mixed with food and roasted, and then eaten,” said Norris.

“But how are we to roast it?” asked Belt; “it would take all our matches to make a fire, and we could not get one big enough to even warm it.”

“That is not really necessary,” replied Norris “We can mix it with our potatoes, which we can crush up into meal, and it will keep us from starving, for when the potato-meal is finished,

we can use it alone, and at the least, it will keep us alive."

"That's something to be thankful for, anyway!" said Belt; "but I for one shall only eat it in extremity. I have heard much of edible earths, but never saw any before."

"It is quite common," answered Norris; "when in a state of famine or distress, people in many countries eat certain earths as food, some raw, others cooked, and some alone, or mixed with other food, such as flour, to make it last longer."

"Yes," said I; "it is common enough amongst the very poor. In Spain there is a particular kind of earth called *bucaro*, very largely eaten; the Hindoo eats his *patna* earth; the Persian, *gheli giveh*; the Swede, *bergmehl*; and so on in many countries."

We tried a little, mixed with potato-meal, and found it of a dry, muddy flavour, and extremely satisfying, but we were bound to confess that our small supply of meal would last a long time, when largely admixed with this new-found food. Each taking as much of the edible earth as he could carry, we proceeded along another passage for a considerable distance, and were just talking of resting, when

there came the faint sound of knocking close by. Having located it to come from behind one of the walls of the passage, we tried to make a way through, but it was solid rock.

“Look here, you fellows,” said Belt, “if this rock is thin enough to allow of sounds being heard from one side, they can also be heard from the other. Let us hammer at the rock and all shout together.”

This was an excellent suggestion, and we set to work with a will, yelling ourselves hoarse and making the whole tunnel echo. After what seemed hours we felt bits of earth dropping around us, and the rock seemed to move slightly, to our inexpressible relief, as we were now too hoarse to shout. Moving aside, we felt and heard the rock crack, and saw thin streaks of light showing through the crevices. These got broader and then, with a crash, the stone was broken right across and fell inwards, we ourselves being almost blinded with the blaze of light pouring through the opening, which went from the roof to the floor of the passage we were in.

CHAPTER VII
THE CITY OF EARTH

“Wie das Gestirn
Ohne Hast
Ohne Rast
Drehe sich Jeder
Um die eigne Last.”

GOETHE.

WHEN we recovered from the blinding glare we saw the heads of several people peering through the opening, their faces expressing the most profound astonishment. We stepped through the gap and were amazed to find ourselves in the midst of some mighty works. On all sides were vast machines and what seemed to be presses and stamps, with hundreds of exceptionally fine men working at them, while from the roof and walls shone a steady, even glow, like a fluorescent screen greatly magnified. The few people who had broken the way through stood surprised, yet expectant ; so Norris asked them where we were, in English, French, and German, but was not understood. Belt asked in Greek, which they seemed to comprehend, for one man replied in that language, but the accents fell so differently,

Belt could make nothing of it ; I then spoke in Latin, which we all understood, and promptly came the answer—

“ This is the City of the Sons of Earth.”

“ Do you speak any language other than Latin ? ” asked Belt.

“ We speak but one language,” the man replied, “ although we do not know it as Latin. Come with me, and I will take you to our master.” So saying, he led the way forward, we all following, very much impressed at the sights which met our gaze. Although, as we found out afterwards, we were in an underground city, we were not at first aware of the fact, as the beautifully soft, yet strong light which permeated everything looked to us like actual sunshine. The people were clad in vestments of an exquisite shade of pink, with just a tinge of purple in it, bound round the waist with some kind of metallic belt skilfully twisted from strands, and as soft and pliable as silk. These belts were tied in a loose knot, and hung down to the knees ; around the neck was a single chain of the same metal, shining like platinum ; they wore sandals and moved about with stately grace. Those who were actively employed wore a sort of blouse, or

pinafore, over the clothing, and these were drawn together at the wrists, as if threaded with elastic, thus leaving the people the unimpeded use of the arms. Our guide, although an ordinary workman, was highly enlightened, and had a far more profound knowledge of electricity, geology, and the sciences than we ourselves had ever hoped to possess, specialists as we were considered to be in our respective branches. After walking a matter of fifteen minutes, through some of the finest streets imaginable, we arrived at the stately entrance of a building cut out of metallic cobalt, the greyish-white metal scintillating in the light in a most curious manner. We were ushered into the presence of a venerable-looking man, who received us with the courtly grace and quiet dignity which prove a cultured mind. On our guide explaining the circumstances of our arrival, the venerable leader said—

“You are the first strangers who have visited us, and I shall be pleased to know whom I am addressing, since we have no one to whom we may look for introduction.”

Belt answered, “We are explorers sent out from England to penetrate the regions of the

extreme south, and if possible to reach the South Pole. We accidentally fell down the crater of an extinct volcano, and have been wandering amongst the caves under it for several weeks. We despaired of ever getting out, and expected soon to die of starvation, but we heard your people at work and they liberated us."

"You are welcome to our city," said he, "which we call the City of the Sons of Earth; I am the official head, and my name is Antistes. But I see you require rest and food, so we will talk together later;" and so saying, he gave some instructions to an attendant, who then conducted us to another apartment. On our way Esdaile asked if we could have a wash, as we had only been able to wash ourselves very indifferently in the springs we had passed. He smiled, and brought us to a room containing large bowls of crystal, or clear stone, which he filled with excellent water, and we simply revelled in it.

After this we passed into another apartment, which was handsomely furnished. At the door was some magnificent metal-work, saw-pierced in a wonderful and intricate manner, and this extended around and beyond, straight up to

the ceiling, forming a vestibule. Having passed through this, we stepped on what appeared to be a tiger-skin rug, but of enormous size, covering the greater part of the floor. It was soft and thick, but on lifting the edge, which we ventured to do later, we found it made of glass, like woven glass wool, woven or stained in set pattern. Instead of chairs were thick cushions like wool-sacks, soft and delicate as silk and eiderdown, also made of woven glass of exquisite colour and design. The table also was of glass or vitrified earth or stone, and had the rich and wonderful variety of colour and workmanship of our best Venetian glass. On this stood four blown-glass vessels, of such richness and value that any one of them would have sold for sufficient to have made all our fortunes; and in the centre a tall goblet, with four handles, formed of a youth and maiden alternately swinging on the rim by the hands and throwing the body outwards, so that one or both feet rested by the toes against the body of the vase, around which were other figures in splendid design. We had never before seen such a work of art, and its value in our world would be priceless. We all took our seats, wondering what we should have to

eat, for beyond the central goblet, which was filled with water, and the four drinking vessels, the table was bare. The attendant filled our glasses with the sparkling water and desired us to commence.

“I think we should be glad of something to eat first, if you do not mind,” said I, dubiously, conscious of sundry messages coming from under my waistcoat, and feeling we ought to say something, when he replied, “This is our only food.”

“Great Scott!” cried Belt; “do you mean to say we cannot get anything to eat here?”

“Only this,” he replied; “we take nothing else, and if you sip it slowly and chew it, you will find it both meat and drink.”

We very much doubted this, but could not do otherwise than accept his statement; so without the slightest excitement or hurry we commenced our frugal repast, which tasted very thin, although of delicious flavour; but by the time we had drained our glasses we felt as satisfied, except in taste, as if we had been dining off steak, which caused us no little surprise. During the meal we could not help noticing the splendid bearing of the attendant, who had not the servile manners of a lower-

class, or the arrogant effrontery of an upper-class, servant. Instead of this, his manner seemed more like that of a host towards his guest ; there was an air of quality about him which was felt rather than seen, and he engaged the four of us in conversation on many scientific subjects, which he entered into deeply. After the meal was over he said, "The worshipful master, Antistes, wishes to have conversation with you," and so preceded us to another apartment, where there were more seats, similar to those we had already used. We gazed about us, and found it difficult to realize that we were underground, as all was as light as day ; the walls and ceilings were covered with choice frescoes, chiefly of allegorical subjects, which we could not understand, and which shone out as if painted on silk and seen with a strong light behind them. We drew up to the wall and closely examined them, to find they were really mosaics, but could not understand how this wonderful effect was obtained, unless the mosaics were some iridescent light-producing metals unknown to us.

In a few minutes Antistes came in and sat down beside us, when Esdaile gave him a detailed account of our adventures. At the

mention of our difficulty at the river, Antistes asked the kind of river, where it was, and if we saw any one.

"I was just about to state," continued Esdaile, "that after crossing this river, we felt that many people were round about us, but saw no one."

"It seems to me a most remarkable thing," said Antistes, "that you, in your present life, should have been permitted to travel there."

"Why so?" asked Norris wonderingly.

"I will explain all shortly," said Antistes, "but I will first hear your story."

Belt then took up the narrative and told of the second crater, and the finding of the edible earth, and how, coming to the sound of knocking, we also had knocked, and been liberated.

"I had no idea we had gone so near the tunnel," exclaimed Antistes, "but this district was at one time very volcanic; in fact, in various places now there are live volcanoes, and the whole earth about here is intersected in many places with old, and active lava-drains, terminating in some crater."

"Do you cut into many?" I asked, thinking it was my turn to say something.

“Oh, yes,” he replied, “we cut into them and block them up.”

“But when you cut into a live one, how then?” asked Belt.

“In that case we should know it was active long before we got near enough to break through, and leave it alone, or strengthen the walls.”

“But are you not afraid that the extinct ones may again become active,” asked Norris, “and flood your city with molten lava?”

“That is impossible,” he replied, with a smile; “one might become active again, but it would find a fresh outlet and not touch us.”

“How can you guard against it?” asked Esdaile, in surprise.

“The feeders of a volcano are like the roots of a tree; they draw the lava from all directions, and this runs along till it all settles in one vast chamber, or core, from which it is ejected above. It will follow the line of least resistance, and when we break into a passage, we make the resistance so strong round us, that it would be easier for the collecting lava and gases to go anywhere than near our city and its ramifications, so that we are perfectly safe.”

“What is this resistance you use,” asked Norris, “that is strong enough to turn the gigantic forces of a volcano?”

“Have you begun to use any natural force in your country which is powerful enough to give light?” asked Antistes, directing our attention to the walls around by a wave of his arm.

“Do you mean electricity?” asked Esdaile.

“Here we call it *life*,” said Antistes.

“How do you generate it?” asked Esdaile.

“We do not make it,” he replied; “it grows, it exists, it *is*, and we gather it to us as we want it.”

“We on the earth above,” replied Esdaile, “almost all over its surface, know how to get it, but not what it is, or where it is.”

“Then you have much to learn, and if you can stay, I will try to show you, not only what it is, but where it comes from, and how to draw and use it.”

“We would gladly know that,” replied Norris, “for we are children in these matters.”

“We shall all be grateful for any knowledge we can gather, and also if you could help us to get to the extreme south,” said Belt, eagerly.

Antistes at once became very serious and

said, "I fear you will never do that. Long ago, in ages past, we were forbidden to cross the barrier, and, as obedient children, no one has ever attempted it."

"What barrier?" asked Esdaile. "The barrier of ice?"

"I do not know," he replied; "all I know is, that somewhere not far from here *is* a forbidden and dangerous district, and our records tell us it is a deadly sin to attempt to pass it. Although we have no fear of what you call death, to deliberately commit an act of wilful disobedience would be to us impossible."

CHAPTER VIII

THE MYSTIC LIFE

“Circles are praised, not that excel
In largeness, but th' exactly framed ;
So life we praise, that does excel
Not in much time, but acting well.”

WALLER.

So serious and reverent were his tones and manner, that no one spoke, and after a slight pause, he continued, “Here, you see, all is warm and equable ; there are no storms, strife, or distress, and we are *content*.”

“How comes this warmth?” asked Belt, “and how are you free from distress?”

“The warmth comes from the heat of the surrounding volcanoes, but they are not dangerous to us, as this ‘life,’ which you call electricity, surrounds us as with a shield and nothing can harm us,” he replied.

“Do you mean that no accident, illness, trouble, or anything else can harm you?” asked Belt, incredulously.

“Yes,” he answered ; “nothing can do us the slightest injury unless we deliberately willed it.

That you will learn to understand if you stay with us.”

“But what is there to hinder our going south?” persisted Belt.

“I will tell you the story as we have it,” said Antistes. “Long ago, the lord of life created beings and made them immortal, body and soul. He intended founding a race of gods, and told them not to do certain things, or their bodies would die and they would lose their god-like aspect. They disobeyed his commands, so he turned them out of their lovely country, lest they should discover the great secret called ‘life,’ for if they did, they could have even defied their lord and made their bodies live for ever. Thinking that in time they might even try to force a way into that lovely place, and steal some of this ‘life,’ the lord built a barrier all round it, and made it so cold and bleak and desolate that no creature could pass it: so these people who had broken their master’s law and spoiled his work, were obliged to go farther and farther away. It is said that so long as this world lasts, no living creature shall ever pass this awful barrier and see the beautiful place beyond. And it is also said that if it were possible for any one to pass it and even view

this secret of life, they should never know it, for the mere sight would blast them where they stood, and, in the mere glance of 'life,' they would find a horrible death, its very brightness being their doom."

"Perhaps you are right," said Belt; "many explorations have been made to the north pole, and with considerable success, but with the south pole it has so far been very different."

"Yes," said Esdaile, thoughtfully, "it really seems as if this awful, storm-riven, inhospitable country was arranged so, in order to prevent all explorations beyond."

"Well, we will try it!" exclaimed Norris, "or die in the attempt."

"Nay, try it not," said Antistes, warningly. "To those who would penetrate the mysteries of the divine, and try to force into the secrets of the infinite, disaster comes."

"This 'life' that you speak of," said I, "if you have its secret cannot *you* live for ever? And is it the same as the secret beyond the veil?"

"We have its power and origin in our grasp to a certain extent only," replied Antistes, "but only our Maker has the power of life and death. It is said that at some time, when we have

lived our lives till perfect, we shall then live with Him, and feed on this source of life, ever after being even as He is."

We could not help feeling much impressed with the devout earnestness of Antistes, and much desired to learn something of the life in the city and why these people live there, and mentioned this, when Norris said—

"Oh, would you mind first explaining to us what you said about the river we passed in the tunnel, as you promised?"

"Why I expressed surprise, is this," he answered. "It is a rather long story, but if I tire you, please say so. All people are born into the world with a definite object, that object being to attain 'perfect' life. Had those people who were first made been obedient, they would have been immortal, and their children also, and at each birth there would thus have come an immortal body, as well as a soul, all dwelling in a paradise; but disobeying their creator, they became bad and their children naturally bad, and so these souls have to be born again and again till they are perfect, for the Master has sworn that not one shall be lost. Thus, in each life, they learn more and more until they are purified from all imperfections, when they are admitted

over the barrier I mentioned, and taste the 'life food' which sustains them eternally, but would eternally destroy them, body and soul, long before it reached their lips if they were not absolutely faultless. The original sin caused their bodies to become fouled and die, and it also fouled their souls considerably. Being fouled in body, and partly in soul—for the body acts on the soul—had they tasted of the 'life food,' their souls and bodies also would then have become immortal — an immortal *wickedness*, worse than complete annihilation of body and soul—and thus they could never have been born again, nor had even a *chance* of winning eternal perfection. You see, then, it was to *save* man from himself that this barrier was placed there."

"How about those who die," asked Belt ;
"where do they go?"

"Those above ground who die go to various places, according to their various lives and the manner of spending them. Thus, those who love geology go to a place where a world is being formed, and for thousands of years study the actual formation of rocks, etc. ; whilst those who love the arts—music, painting, and nature—stay with the soul of nature, and see the

great heart of creation, learning the love of the beautiful, until at last the spirit or soul is born again with a new body, coming into the world the next time with the accumulated learning of the past years, perhaps appearing to newer souls as a prodigy, or one possessed of wonderful gifts. Out of the vast infinite this spirit draws its kindred spirit to it, who, recognizing its former love and companion, longs for it again, and so the two are again brought together; thus it goes on, each soul helping the other to perfection, when they are taken to the highest possible life and live together in the spirit for evermore. Being in themselves perfect, they then exert their influence to make others so, and lead them by thought and suggestion in the better life."

Here Antistes paused and appeared quite unconscious of our presence, but none dared break the train of his thoughts. At last he continued—

"It sometimes happens that some are rebellious, and when a change is coming and they begin to float down the river called 'Death,' it is with hatred in their hearts. They will not see that this call to step into the stream has saved them from committing further sins,

and that it came for their good, but look on it as an evil thing which they are compelled to obey, but which has prevented them gaining some unrighteous power ; so to them the river loses its brightness, and the ferry which plies from bank to bank cannot be found, and they must step into the river alone. Unaided, they are carried along by the current past the glory and brightness into the darkness and misery of the world's filth and wretchedness, and at last, perhaps catching at some rock in their desperation, they reach dry land, where they wander backwards and forwards by the dark river's banks, unable to find rest and comfort. At last repentance comes and they long most earnestly for a chance to live a better and nobler life, when their Creator gives them another trial, and in due time these dark souls also become perfect.

“So great is our Master's love that it is His boast He has never lost one soul, but allows it to try and try again, till finally these trials result in a complete purification and a bright immortality.”

“Then would they be lost souls whose presence we felt in the tunnel ?” asked Norris.

“No, not lost—none are ever *lost*—but

they would be souls who, for the time, are abandoned to their own wicked desires; in fact they will refuse everything that is good till repentance comes; and they would have killed you had that been possible, so relentless are they in that phase of existence."

Here he paused, and I ventured to ask, "Why are you and your people here? What state of life is this?"

He answered, "We have gone through many lives, which at first we could not remember, but as each life passed and another came, the soul appeared to develop a consciousness of having lived before, and many things which others might now do with difficulty we can do without effort, feeling in our souls that we learned it long ago; and again, what some of us now find difficult others of us can do with ease.

"Here we are splendidly situated for the study of geology, optics, life (which you call electricity), and many other sciences. We see the actual formation of the metals used in the earth above, also of crystals, diamonds, and thousands of other things. We are so close to the heart of Nature that we can hear, feel, and measure the heart-throbs of the earth's liquid

life, and discern the exact time and place where it will disgorge its surplus in a volcano. Here also we can accurately determine the cooling of the earth's crust and its settling down, the cause and paths of the earthquake, and the magnetic influences in the earth. By unerring instruments we accurately measure the rotation of the earth on its axis, the boundaries of the seas, the formation of land under the seas, and the depth and weight of the water. We also learn by actual sight, sound, and touch why the mighty seas cannot percolate through the thin crust of earth into the liquid, white-hot heart of the world, which lies close under its surface in hundreds of places. And as you will know, if this happened, by a natural law of chemical union the explosion of the mixture would tear the world to fragments and utterly annihilate it."

"How is it possible for you to see through this earth?" asked Esdaile.

"We photograph it," Antistes answered. "I will show you photographs of all the world except the part you want to go to, for we have never succeeded in getting a photograph of anything beyond the barrier; all have been failures."

Antistes now became silent, and Norris remarked, "You said just now that what you are doing would be of benefit to you in your future lives; but do you remember all your other studies in the previous existences, and how does this act on the souls of others, if at all?"

"The memory is only finite," replied Antistes, "and cannot at first retain all it learns, so a great deal of it is forgotten, but sufficient is remembered to make the life of benefit to other lives. The whole of creation is so arranged that each soul requires other souls; and we cannot remember all we learn, because some other imperfect souls keep the memory from expanding."

"How can that be?" said I. "If each soul is learning individually, how can the faults of others hinder it?"

"In this way," Antistes replied; "take yourselves, for instance; when you live again, on or in the world, you may probably be great scientists, and the other people living at the same time will be better for your present life; you may remember some things learned now, and show how certain things can benefit your fellow-creatures, but it will be nothing on *your* part but a remembrance. At the same time

there may be evil influences around you, people who strive for personal gain, instead of trying to live better lives to fit themselves for immortal perfection. These influences cause the soul to shrink in fear, lest it should be turned from its purpose, and so it dare not expand as it otherwise would. Thus selfishness, unkindness, and insincerity dwarf the memory of each soul they come near and cause it to forget certain things, and it may, in consequence of this, have to return many times more than it otherwise would before perfection is reached."

We were all much impressed, and remained silent, watching our venerable host, who sat thinking deeply. At last, changing the subject, he said, "How do you draw your 'life,' your electricity, from nature?"

"We generate it," replied Esdaile.

"Why? It is already generated. It is in everything throughout nature."

"That may be," answered Esdaile; "but still we must generate it in order to make it of commercial value to us."

"That is going a long way round," said Antistes. "It is like exploding oxygen and hydrogen in order to make the water we require, when it is already in the earth on all sides, and

only needs boring for to be obtained in any quantity. Electricity is all round us in great volume, and yet you *generate* it, which seems to me a waste of your own energy."

"How can we do otherwise?" said Esdaile. "It is such a mighty power that we are often injured in the working of it. We do not understand what it really is, and know but a few of the laws by which it can be controlled."

"I must show you," Antistes replied. "The earth and air are full of it, and although in enormous volume, it is as easy to control as water is. Of course you may drown in water or be burnt up in electricity by want of care, but not otherwise. You need a volume of water, so you bore for it, or use some river, taking what is needed and allowing the rest to flow on—so it is with the 'life fluid,' which is just as harmless and plentiful; we take what we require and the remainder passes on. There is far more of both than the whole world can use."

"Do you then know the whole secret of electricity?" asked Norris, in respectful wonder.

"No," replied Antistes; "we know enough about it to get all we need from the air and earth direct, and also that the secret of life

itself is electricity—hence our name ‘life fluid’—but we do not know how it is applied to give life. As I said before, no one will know that till completely purified, when our great Master will breathe into our nostrils a breath of this ‘life,’ and then we shall be stainless for eternity, even as He is, and equal with Him. And now I fear you must be weary with your journey and privations; take your rest, and afterwards I will place myself at your service and explain the way in which we people here use our ‘life fluid.’” Then, saying he would send some one to attend to our wants, he departed.

Immediately we were alone we commenced to discuss the situation, naturally, and Norris said, “This is the most enjoyable and unexpected experience of my life, and if we never get to the Pole at all we shall have made discoveries to warrant our journey. Imagine being able to see and examine the actual formation of the world!”

“I only hope he will be as good as his word,” said Esdaile, “and show us the actual method of drawing electricity like water, and without machines. That would be something like a discovery, would it not?”

“It would indeed,” said Belt. “Fancy our thinking we heard a noise, and but for that chance sound we should have missed this place altogether; it is very lucky!”

“What will Carleton be doing, I wonder?” remarked Esdaile; “it must be three or four weeks at least since we left him; perhaps he is still waiting at Mount Terror, or he may have followed us.”

“Let us ask Father Antistes if he can help us to send a message to him,” I suggested; “if they can photograph through solid matter they should be able to do that, with their superior knowledge.”

“We might also ask him to demagnetize our watches and compass,” said Norris; “it is very awkward to have lost all note of time and direction.”

At this moment an attendant came in to ask if we lacked anything before retiring, and to say that all our belongings had been placed in the next room. We said we were very tired and would retire at once, when he asked if we preferred darkness or light during sleep. We replied, “Darkness,” and our astonishment may be imagined when he retired to the door, then turned and faced us, standing as though about

to speak. Instead of this he stretched his arms towards us, opened both hands, with the palms upwards and open and the fingers separated; we watched him in wonder, and saw his fingers quiver as though feeling for something, and then they gradually closed. Slowly the light faded, till there was nothing but a faint fluorescence, and then profound darkness. Before we recovered from our surprise we were alone in a blackness that could be felt.

“We have evidently got to sleep on this business,” said I; “good-night;” and, lying down on the cushions, I fell asleep with a faint recollection of the hum of my friends’ voices talking over something or other that I was too tired and sleepy to listen to, which I was glad of, for from what they told me afterwards I had not lost much, although I think somehow they were jealous at my dropping off so quickly.

CHAPTER IX

A MESSAGE THROUGH EARTH

“ I'll put a girdle round about the earth in forty minutes.”

SHAKESPEARE.

WHEN we awoke we found an attendant waiting to conduct us to our baths, those we had in a room through which the water flowed in a gentle stream, as though it were an arm or reach of some river. The room was about fourteen feet long, by ten feet wide, and had a platform of glass running the whole length of it, one side forming a bridge or footway, the other projecting over the stream for about two feet, and about twelve inches above it, so that if one wished but to wet or cool the feet, by sitting on the edge of this platform and allowing the legs to dangle over, the feet would be immersed in the water. For some little time we were at a loss to tell how the water was kept in motion, as the walls were solid to the floor at each side, but by carefully watching, the clear, crystal water could be seen oozing up at one end like a spring, and soaking through a porous portion of the floor at the other, main-

taining a constant level, with the water about four feet deep. After a refreshing bath we returned to our first apartment, where we sat down to a frugal breakfast—of water—served in some different and perhaps even more beautiful vessels than before. Healthful as the meal might be, I, for one, felt that I should have much preferred something which necessitated the use of a knife and fork, but one must not look a gift-horse in the mouth, so I said nothing, but thought a great deal. However, when the water was taken in sips and chewed a little, as one would chew a raw egg or an oyster, it certainly was as invigorating as wine. We drank about a pint and a half each, and rose from the table refreshed and ready for anything.

“It is strange how satisfying this water is,” remarked Belt to the attendant. “I am as tight as if I had been dining on chops.”

“It is very sustaining,” he replied; “we here live on nothing else. It is drawn from a spring in the centre of the city.”

During this meal we had discussed the apparent magic of the lighting question, and were anxious to ask our host how this wonderful element was controlled; we were therefore

much delighted when he sent for us, and almost the first question was on this subject. He seemed rather amused at our eagerness, and said—

“First tell me how you store yours for use, as you say your custom is.”

Esdaile replied, “We store ours in a battery which has two poles, and the current causes the hydrogen from one to exchange itself with the oxygen from the other until no further change is possible, when the battery is run out, or discharged. We then bring it back to its original state by driving a reverse current through it from a dynamo, or some other source of power, when the battery will be again charged with electric energy, and because this energy can be stored in these batteries we call them accumulators.”

“That is quite right,” said Antistes; “but you miss the *essence* of the matter and imprison only a portion of the *shadow*, as it were. I will tell you how we gather the *essence*, and try to help you to do the same, but I fear your perceptions are not sufficiently delicate to feel the ether as we can. That is the whole secret of the matter, and is really simplicity itself.

“Ether, as you know, is a peculiar substance,

or medium, filling all space and permeating all matter, and always pulsating to the molecular vibration of matter ; on it are carried life, sound, and—to use your appellations—electricity and magnetism, and under certain conditions these two last produce light by being brought on the wave currents and becoming visible. These act, not as by *pushing aside* an elastic substance, but as by melting that substance and causing it to flow as in liquid form. Now in this ether, which acts on molecules and not on the mass, there are straight and curved waves, attractive and repellent, corresponding to the two poles of your batteries, but not connected ; when these are joined, or some suitable form of matter is placed between to join them, then their power can be obtained direct. They go along in a kind of double web, the fibres or waves of each of which may be gathered together with perfect ease by any one sufficiently skilled to do so, and according to the number of fibres placed together, so is the strength of the current.” Then, suiting the actions to the words, he continued, “ Thus I hold out my hands, with the palms outwards and upwards, with fingers extended, and I distinctly feel the waves of ether passing through them and through me ;

I gather the waves into great clusters and you see the light is brighter—more clusters and it would be blinding. Now I diminish the number and the light fades ; more and more and it returns ; less and less and it is dying out, and now darkness prevails ; now all is light, of the same intensity as before. Is it not simple ? ”

We were all lost in amazement, as it looked like some juggling trick, only we knew it was genuine ; and Belt asked—

“ How is it that you yourself are not injured ? ”

“ Simply because I do not allow a current sufficiently strong to pass through me,” he replied.

“ How is it that we on the earth can be killed by a comparatively low charge when a very high one is harmless ? ” asked Esdaile.

“ I think the reason will be this,” he answered ; “ as I said before, the current will act on molecules, but not on the mass ; and when a certain strength passes into the body, it rearranges the molecules or atoms of the body into straight fibres, and limbs and muscles will consequently become rigid, so that the current has then undisturbed passage right through and becomes comparatively harmless ; whereas when the current is great, but not great enough to rearrange

the molecules in this way, they cause resistance, which produces heat and burns up the life by its intensity."

"Do you have death here?" asked Belt.

"There is no such thing as death," Antistes answered; "nothing in nature ever dies; there is merely a change from one existence or state to another."

"Would you mind telling us how your change comes, and if you are conscious of it?" I asked.

"Before one of us is changed," he replied, "he knows of it and calls us all together, and we spend the last few days in his company, congratulating him on his being raised to a nobler, or higher degree. Then he finally falls asleep, and his spirit travels on waves of ether through space and matter to another life, whilst the envelope, or body, then useless, is burned by electricity. But come, we will go into the city." And so saying, he arose, and we followed him out of the house into the open space opposite.

It is impossible to describe all we saw during that day, many of the wonders being explained so lucidly and gently that we obtained a clear insight into methods of achieving wonderful results which would greatly benefit our world, should we return to it. In the workshops we

also saw the electric forces being used without machines, merely by the hands of the operators, and what we thought were presses, we found to be store places of peculiar form. All weights were lifted by the electro-magnetic forces of nature, and the same forces carried goods from place to place, the haulage, traction, etc., being therefore merely the direct application of a deep knowledge of the forces of nature.

The people were magnificently contented, each one working his very utmost in search of knowledge and freely imparting it to any who were not so well informed. They lived in community, without any selfishness or desire other than to study and learn all that was possible to help each other, and make their city, and all living in it, brighter, happier, and better. These high ideals had their effects physically and mentally, for they were steeped in learning. As is always the case in true greatness and knowledge, they did not seem to feel how much they knew, but rather how infinite the knowledge beyond them, and their eagerness to do anything that would teach them was really astonishing.

They revered women, and both sexes lived together in perfect love and unity, and

none had ever been known to prove false, either in thought, word, or deed.

When asked if they would not like to go to the outside world, the air of which they had never breathed, they would not even consider the idea, saying that their life would be by no means long enough to learn all they wished where they were—also they were happy and contented, every one loved them, and they loved every one, and what more could they desire?

This reference to the outer world reminded us of our friends there, and Belt asked Antistes if it would be possible to send a message to Carleton, the captain.

“Certainly,” he replied, “we can *send* any message you like with our instruments, but it would not be understood, I fear.”

“Why not?” asked the irrepressible Belt.

“Because our instruments are of a higher grade than yours will be.”

“Have you never tried?” again asked Belt, a little sarcastically.

“No, never! Why should we?”

“Well—it seems to me,” said Belt, rather confused at the disarming, quiet answer, “that you would have liked to get into communication with other peoples.”

“No, nothing of the kind,” replied Antistes; “we are quite self-contained, and do not desire intercourse with other cities.”

“Is not this a very narrow view to take of life?” said Belt, with some warmth, taking the answer as personal.

“Quite the reverse,” Antistes replied, smiling; “we know the object for which we are here, and are straining every nerve to fulfil it, and do not wish *anything* to turn us from our purpose.”

“Are not we, by our presence, a distracting element to you now?” asked Belt, feeling he was not getting the better of the argument.

“No,” Antistes replied; “you are here with us, and if we help you to a better and more earnest life, in doing that we are fulfilling our mission.”

“Could you not so help others by such intercourse?”

“I am sure not,” Antistes replied. “From the long experience of past ages, we know that if we introduced outside elements and intercourse as a general thing, there would begin unholy strivings and dissensions, and we should retrograde. Believe me, we live the best life as we are, and are nearer our goal than we should be

with outside commerce ; but for you, it is right that you should try to communicate with your friends, and we will see what we can do."

Esdaile then explained to him our invention for wireless telephony with ordinary instruments, but Antistes had never heard of such a thing. Then I made a rough sketch of it, and he said, "I think I have seen one of those things, but it is in our museum of ancient and obsolete instruments ; we will go to see, as it is close by." So saying, we stepped aside and entered a long building with many rooms ; after a long search we found a telephone, which was, to all intents and purposes, like ours. On examining this, we found it in fair condition, with some dry salts in the jar, the water having, of course, evaporated. We had some fresh water put to the salts, and whilst this was in progress, Esdaile, who had adjusted our instruments when we left the ship, now tried to get this one in unison with them, and, after much difficulty, succeeded.

In searching for the telephone we found some copper wire, and this was put to earth, and in a minute or so we were talking with Carleton. He said that we had been given up as lost, and they had been searching for us everywhere ;

Esdaile told him where we were, and that we were safe and sound, also asking him to remain near the foot of Mount Terror, in some safe spot, till we should return. Then Belt had a chat with him, then Norris, but somehow the thing gave out whilst they were talking and refused to work again, so I did not get a word in. Norris said the captain did not believe us, looking on the thing as a joke. I thought to myself it would have been better to get outside, before asking Carleton to wait for us, because *I* did not see much chance of our getting near Mount Terror before Doomsday.

After this we asked Antistes to show us the photographs of the sea-bed, etc., as seen from below, which he was good enough to do, taking us back to his house for the purpose. There we saw a unique collection of various parts of the earth seen from the underside, and clearly showing the exact parts where metals, ores, and the like exist. They were very much like Röntgen-ray photographs, only going much further and giving the natural colour also. They were taken by the phosphorescence of various substances, such as platinocyanide of barium, sodium, or potassium, in connection with electricity. Crystals of these metals were

arranged on a large screen upon which was focussed the phosphorescence which covered the walls of a large glass vacuum tube charged with a strong current of electricity. The whole was enclosed in a kind of camera obscura with a powerful lens, and when this was pointed in any direction and charged, a coloured imprint of whatever was before it in focus was taken on some specially-prepared opaque glass. It will be seen that the process differs from the X rays in that with the latter the object to be photographed must be between the vacuum tube and the fluorescent screen, so that its power is limited. Here the rays could be projected through the world ; it was merely a question of the current used.

Antistes took several of these photographs for us, which showed the liquid lava, and beyond to the gold fields, and practically the whole of the world and its formation from this city to the outside earth in all directions. The plates required washing only, no developing was necessary, and being white, opaque glass, showed all the colours as in nature. They took about ten minutes to print deep enough, and it was most interesting to see the details gradually strengthen till ready, when the plate was taken

out. We were naturally extremely interested in these unique photographs, and obtained fourteen each. Antistes was good enough to give us the formula of the substance with which these plates were coated, and also presented us with all the photographs which we ourselves had taken, and which have since been greatly admired in our respective homes, forming as they do a collection of which any connoisseur would be justly proud.

Well satisfied with our delightful experiences of the day, we retired to rest in the luxurious rooms set apart for us, Antistes promising to give his time to us the next day also. The attendant then put us in the black darkness as on the previous night, and, soon hearing sundry snores from different parts of the room, I fell asleep—probably adding mine to the trio and altering the composition to a quartette, after the style of Wagner.

CHAPTER X

THE HYPNOTIC RIVER

“Now the wind has got into his head
And turns his brains to frenzy.”

DRYDEN.

ON waking the next morning we found the room in semi-darkness, and an attendant came to us with an apology from Antistes, saying he had much business that day which could not be arranged without his personal attendance, and so he would be unable to be with us till the day following. In the meantime, he would send a guide to show us anything we wished to see and give us some idea of the manners and customs of the people.

We then partook of a meal like the previous ones, and felt the energizing properties of this water. In fact one meal each day was all we had whilst with these people, nor did we feel the need of any further support. After our repast our promised guide entered—a comely youth of about twenty years of age, of gentlemanly appearance and address. He requested us to follow, saying his instructions were to

give all information possible. Then, leading the way, he conducted us outside, and we were much surprised to see that the *air* itself was glowing with light. This light had before come from the walls, now it was like daylight—actual sunshine—the whole street was one solid glow, as one may see in a steel-melting, or pottery furnace, where the interior is one throbbing mass of shimmering rose-coloured heat, only in this case there was no heat. We were in it, breathing it—a tangible yet ethereal flame, solid, palpitating, glowing ether, without heat, or heat so slight as to be but like a warm summer's day. It was astounding.

“How is this?” asked Norris. “When we came, the light emanated from the walls, now it is in the air.”

“As you will notice,” replied our guide, pointing to the rocky walls, “the ground and rocks in which the city is built are rich in copper, iron, and strong magnetic ores. They are therefore excellent conductors of ‘life fluid,’ and ordinarily we cause the ‘life fluid’ in the ether waves to be diverted to the ore, and sparks fly from these waves which are passing close before the walls, describing a series of small arcs between the two points. The result

from myriads of these little arcs is, at first glance, a solid sheet of flame."

"Are not the heat and danger from it considerable?" said I.

"The bulk of the heat is passed on into the ether, because we only take that part of the wave giving the light, and the gentle heat coming from that maintains the city at a mild temperature, which is also much augmented by its nearness to volcano runs. The earth often varies in temperature, and a few hours ago the city became colder. Our master, Antistes, in order to maintain an equal heat, changed this, and now, instead of the electro-magnetic waves of ether being diverted to the ground and walls, they are drawn together in the air, and as ether permeates everything, you see the air itself full of light. This gives more warmth than when sent to the surface of the rock."

"I do not understand how so much current is obtained without a fearful heat," said Esdaile; "an electric furnace at such a colour as this would cause most of our metals to run like water, and yet this is but the heat of a summer's day in our country."

"If we were to take all the attractive ether waves in this space and bind them together,

and all the repulsive waves and bind them together, forming two separate bundles, and then unite the two bundles, there would be such an electric discharge at the contact as would annihilate the city and all in it. But although *you* see it as a solid light, it comes from countless millions of tiny and separate waves of light, which pass through us and everything in their path harmlessly, because each separate attractive wave is joined to another separate repulsive wave, and their union causes a kind of fusion during any desired length. This gives a gentle heat and also a continuous faint light, and thus the separate points of light are so numerous as to appear to your sight as a solid flame."

"But how is it that these do not join and form a solid mass?" again pressed Esdaile.

"Because there are other waves in ether besides the electro-magnetic, which surround them and not only form perfect insulators between them, but being cold, counteract any uncomfortable heat. Of course, if we were very cold, we could use the magnetic earth in addition, or even cause the heat waves to expand and offer a greater surface of heat, but we never need more than one agent at a time."

Our guide now explained the various pursuits

of the people, to describe which would be but to enlarge on the pursuits of the inhabitants of England, for apart from the fact that they lived in community, they worked and carried on trades and professions as is common with us, only on a far more exalted scale; it might almost be said that we were in the afternoon of the first day of human life, whereas these people were at the noon of their third day. In fact, the noblest enterprises of the minds of the outside world in the arts and sciences were here the achievements of young children, given and performed as easy school examples to train their minds by simple demonstration. Consequently all expert work was of a very high order indeed. To quote a few instances as examples:—It has hitherto been impossible to cast fine, delicate objects in chilled steel, owing to the rapid cooling of the liquid which is so cooled on coming into contact with the cold mould, which is usually of iron, as to become thick and refuse to run into the fine patterns; but here the most delicate and intricate lacy castings were made daily in chilled steel, which were even drill-proof, and having a softer centre were very tough, yet resilient and not easily broken.

The excavations for city extensions provided

them with ample material for their work. This material was very rich in minerals of all kinds, which were converted in peculiar furnaces ; the fumes from these passed through certain receptacles, depositing in each their several chemical constituents, such as carbon, nitric and sulphuric acids, ammonia, etc., so that nothing whatever was lost, nor did anything escape into the outer air—even the heat was condensed as water, purified, and used as steam for power. Thus everything was recovered, either direct or as a by-product.

The air seemed to come along with several swiftly-flowing underground streams which roared and swelled in cataracts of foam. One of these particularly attracted our attention ; it entered the city at a height of about sixty feet above the roadway, from a great black cavern above, down which the wind came with a strong and steady blow, the great deep volume of water falling over the top as smoothly as oil, certainly in not less volume than two hundred feet wide and one hundred and twenty feet deep, and then fell sheer down that great height to its bed a little below the road. About twenty feet below its oily overflow, it commenced to divide in fans and rods of foam, becoming

whiter and whiter as it descended till the last ten or fifteen feet appeared like snow ; and thus it fell, in a crashing, thundering smash, on to the rocky bed with a force that seemed likely to drive it through the whole globe. It was impossible not to be filled with a great awe. Thousands of tons of water fell in one continuous crash, and then for a distance of about forty yards it rushed along its bed, a sea of hissing, splashing whiteness. At the far end, about five hundred yards away, it again fell into a yawning gulf of blackness, straight down till the white foam, again lashed into a double fury, became greyer and greyer till lost in the blackness, whilst the echoes from the gulf arose in an incessant roar and rattle like thousands of machine guns in action. The wind caused by, or brought down with, the falling water, was terrific, almost a gale, that at the entrance being as much as we could stand against. All this part was palisaded round, and well for us it was so protected, as the effect of the seething mass of foam-covered water had a curious, hypnotic effect on us, as it ran eddying in countless circles, all running to the outlet. The stream here, that is about the middle of its length, looked so inviting, and the foam-flecked water

but a sheet of turbulent cotton wool that would be a soft and delicate bed to rest upon, that the gazer felt inclined to jump in and try it. Some distance farther on it was even more inviting, for the cotton wool became detached into little pillows which twisted and twirled in a most fascinating manner. These passed on so slowly that we could easily keep pace with them as we walked along the bank, and then, suddenly they shot like lightning over the mass of smooth, oily-looking water, and in a second, were split up again into a dust of foam. If we could only save one of these soft, woolly pillows by jumping in to catch it before it shot away! and the water looked so calm at this spot that any one could swim it; and now we gazed on the stream without any fear, similar thoughts being in all our minds. Belt was near the guide some little distance ahead, and what was our horror to see him all of a sudden fling off his coat and mount the palisade! Our guide tried to stop him, but he broke loose and climbed it a few yards higher up; he had actually taken a header when the guide came up and just managed to grip his ankles as they left the rail. The sudden stoppage brought Belt to the perpendicular, with his feet at the top, and his face crashed

into one of the rail-stays, inflicting a nasty cut on his forehead. Almost at the same instant we came up and hauled him back to safety.

“I owe you all my life,” he remarked, mopping his forehead, “and you particularly,” to the guide; “in another second, ay! less, I should have been miles away down that hole;” and then he turned to us and said appealingly, “Forgive me, comrades! I am no fit companion for you when a sight like that turns my brain. I am but a weak stick to lean upon in an emergency, and I may—judging from this—prove a real danger to you when I should keep coolest. You must go on without me.”

“Nonsense!” said Esdaile. “I scarcely like to say it, but had you not given me a steadying shock, I believe I should have been over in another minute.”

“I was standing with my hands on the rails ready to vault over,” said Norris.

“Confession is good for the soul,” said I, “and I really think that but for the fright you gave us, I, as well as the others, would now be battered to pieces, so that we seem to be all alike, except Belt’s head.”

They all burst out laughing at my slip, and Belt said—

“Whatever you may have felt, the fact remains that you did not give way and I *did*.”

“Never mind,” said Esdaile; “even if you are a fallen star” (this in allusion to Belt’s profession), “we are very thankful you have not gone down below the horizon, and it will be a lesson to all of us to keep our heads a little clearer.”

Our guide now took us to a quiet stream, where Belt’s wound was well bathed, and having obtained some kind of lint made from fibre, the damaged part was done up comfortably. We asked if they were affected as we had been, but he had never heard of such a thing before; the railings, being covered with glass fibre, formed insulators, and were there merely to keep the river from electrification. He then asked if we would like to see the other air passages, and on our assenting, took us to view similar falls and caves, but the water had no further baleful attraction for us now we were on our guard.

Returning to the city, we visited several stores, where everything needful was sold by exchange. As the city was self-contained, there were few of the things and implements used by the world generally. The manufactures also were different, and necessarily only for the people’s own use. The food question being by nature disposed of, their lives were lengthened

by at least half, for speaking generally, the working for food, selection, cooking, and the sending and receiving of it to and from other countries to get variety, occupies quite half the lives of people on the earth. Here, therefore, having no exports and comparatively little need for work, except for replacements, extensions, and supplies, the people had more than twice as much leisure as we are accustomed to, and this they spent in studying the arts and sciences—chiefly sciences such as botany, geology, metallurgy, and physics—heat, light, sound, electricity, pneumatics, hydrostatics, mechanics, mensuration, hygiene, etc., etc., in all of which they were far in advance of the outer world.

The whole city was cut out of the earth-bed and rock, with the buildings having vertical sides and horizontal roofs and floors. Broad openings took the place of windows and doors, and the roof of the city was supported by massive slabs left standing, the spaces between forming wide streets, or chief thoroughfares. These were perfectly straight, and branching from them at right angles were other and smaller streets.

Alongside these streets at both sides were dwellings of two, three and four rooms, mostly two storeys high, the stairs being stone. The openings in place of doorways and windows

made the whole house open to the street except for the massive supports, the spaces between which were hung with curtains of woven glass, made to draw or fold at pleasure.

The people had magnificent optical instruments, such as microscopes and the like, and the lenses were ground with marvellous accuracy. The enormous power obtained in these lenses, combined with great field and exceptionally large amount of light-transmission, giving sharp definition all over the object, was quite a revelation to us, but our guide told us that optics was one of their chief studies.

They had libraries and public lectures ; also musical recitals, which were largely attended, the people being very fond of music and excellent performers on many instruments, chiefly of the stringed type. The strings for these were made of a species of flexible, straight-fibred root, those with deeper tones thicker and wrapped with silver wire rolled to about forty times the thinness of a human hair, and some were doubly wrapped. Their gamut consisted of ten notes, with half and quarter tones between each, and the people possessed a much more refined ear than those on the earth above.

We could scarcely realize that we were in the bowels of the earth, all seemed like a vivid

dream. These people were so far above us in manner, appearance and knowledge, that in comparison we were but children with partly-formed minds, only able to repeat a few verses, and perform a few simple elementary experiments, and yet, to the outer world, we ourselves ranked very high in wisdom and research. It only shows that learning is merely a matter of environment, and that the veriest fool may appear as a genius amongst greater fools, and the colossal scientific mind may be only that of a fool if amongst other minds infinitely greater. It is merely a question of degree in contrast.

Thus our thoughts and feelings ran long before the day was over, and, by the time for rest had come, we felt that what we knew, compared with these people, was nil. All our lives we had been studying hard and constantly, and yet here, we could pick up a child, any child, who would give us far more intelligent information than we ourselves, after all our studies, could impart.

We were disgusted with our puny brains, and, being very tired, this gradually developed into a fit of the blues, in which we all sank deeper and deeper. Our guide had now retired, and so we lay down to rest, weary in mind and body, and courted that rest and sleep which usually come to the healthy—be they learned, or fools.

CHAPTER XI

ENTOMBED

“Calamities sent by heaven may be avoided, but from those we bring on ourselves there is no escape.”—*Turkish Proverb.*

WHILST we were having breakfast the next morning, or what we called the next morning, we talked over the possibility of continuing our journey, for much as we should have liked to stay, even all our lives, it was necessary that the object of our mission be not lost sight of; so we spoke to our kind host on the subject, and asked if he could direct us how to get farther south, past the ice barrier to the land beyond, but he either could not or would not tell us, saying that *there* was the forbidden country. Nor could he tell us how to get upward to the open air to where our friends were waiting us, and he said we could not return the way we had come, as the “shades” —who had no power on the farther bank of the river—would prevent our recrossing, although they could not kill us. The only thing he could suggest was for his people to

open one of the volcano drains, or supplies, and for us to risk the chance of being asphyxiated by gas, burnt up, or otherwise perish in the passages or in the interior of some crater. He, however, saw the absolute necessity of our making a very short stay with them, as he told us that the vast amount of electricity in the city would soon prove fatal to us, as we were physically unable to endure it for long; we therefore decided at once to make the attempt, and Antistes instructed the nearest blocked passage to be reopened and the air tested. In the meantime, our watches and compasses were demagnetized and corrected by Antistes taking them in his hands and altering the waves of current, after which he returned them to us, saying that no adverse volcanic action would affect them again, but if we left that region and travelled north, they would be useless, as he had adapted them to the peculiar magnetic conditions of the south. This, later, proved to be correct, for on our homeward journey all became stationary on reaching the fortieth parallel, and soon became welded together, as they are to this day.

He then returned us our furs and other impedimenta, and gave us each a piece of some

metal which he helped us to attach to our caps, saying, "I will give you a useful souvenir which you will be wise not to part with until you return home." Then, holding his fingers near the plates, continued, "I am now bringing some millions of ether waves together, and see, each plate becomes lit with a blinding intensity." And again smilingly continued, "They will be very useful to you in your wanderings in the dark. You will need no batteries, accumulators, or wires, or any other of your methods, for so long as these waves remain connected—as they will for ever, unless you sever them, and you cannot do that yet—you will have a brilliant light to guide you, and remind you of the City of Earth." So saying, he put our hooded caps on our heads, and we noticed that he had caused strings of some sort of fibre to be attached so that we could tie the caps on and run no risk of losing them. He did this as we all felt afraid of touching them, lest the power of the light should burn us.

"Fear not," said he; "there is no heat to speak of. Notice that I have made the light stop some little distance from the plate; there is, therefore, a current of air passing between

the light and plate, which keeps the latter cool. Nor would it be more than just warm if it came up to the plate, or any metal which may be interposed, for I have also confined the energy so that it shall expend itself in light only and form no heat; see, you may pass your hands through the light and feel no warmth." This we did, and were much astonished, upsetting as it did all our known laws of physics. It may not be out of place to say here that although some time has since passed, and the occasion is but a pleasant memory, one of the rooms in each of our respective homes is still brilliantly lighted day and night with this ever-present gift.

In order that we should not faint through lack of food, Antistes gave us a quantity of the nutritious water, which, for convenience of carrying, he compressed in a peculiar machine into a soft, flexible cord, which we wound round a bundle of woven fibre like a stick, so that we could conveniently bite off a small portion each day. Some of this we still possess, and it has not altered in the least, either in appearance or sustaining property.

"In order to keep you in view," said Antistes, "I will photograph the earth at intervals

in all directions except the south, which for some reason or other we cannot photograph, and will endeavour somehow to warn you of impending danger ; but our powers are useless farther south, and if you should go in that direction all communication between us will be lost."

We then journeyed to the newly-opened tunnel, accompanied by hundreds of the citizens, Antistes leading, and after a most cordial leave-taking of our new but delightful friends, many of whom expressed the hope that we should meet them again and continue our friendly relations either in this or a future life, we searchers for the unknown entered the passage and commenced our tramp onwards, this time in a blaze of light.

We were soon beyond the sound and echo of the city, and then we asked ourselves if it had been a dream ? But no, it was no dream ; our old antiquated food—so up to date as we had thought it—had been eaten and the edible earth discarded, and instead we had far better and more convenient means of sustenance. Then there were our lights, and our beautiful photographs neatly packed in unbreakable fibre boxes ; all proved it actual experience and no

dream. Then, like children, we must needs sit down and gloat over our unique pictures for a while, after which we returned them to our pockets and followed the tunnel to wherever it might lead us, perhaps to safety, perhaps to a miserable doom after a journey more or less long.

We were now going due east, and for an hour or so no one had spoken, each being busy with his own thoughts. At last Norris, who chanced to be leading, stopped and, turning round, said, "My friends, we have left a people whose every thought and desire is to please their Maker and do Him honour. It seems to me that His gracious care has protected us, given us a nobler ideal, and proved to us that there is no such thing as *chance*. I do not wish to 'preach,' in fact I hate it, but I do not think we can do better than fall on our knees and ask God's blessing."

Somehow our thoughts had all been running on the same thing, and so with one accord we knelt down and prayed that we might be guided aright, and if it was the Divine Will that we should have the means of continuing our journey to a successful issue, we might be enabled to do so; but that, whatever lay before

us, we should recognize God's hand in it, leading us in the very best paths for our own ultimate good, and the glory of God.

We arose from our knees happy and confident. Thus it came about that we four—scientific atheists—having accidentally fallen into an old shaft, in a few weeks' time in another and similar shaft were *now* sincere, devout Christians, seeing and recognizing the Divine and Loving Creator in the very things we had many times publicly stated proved the absence of a God.

Thus are hearts changed. Often out of the few ashes which the fiery furnace of trouble leaves behind it there rises a new and glorious life and love, pure as refined gold.

So it was with us ; we started full of the stern, unbending laws of nature without a God, and now we were making another start, this time full of God's wonderful love and goodness in allowing us to exist and see some of His marvellous creations, our altered minds seeing the Divine Finger in everything we passed, happy in ourselves, fearless of the future !

Very soon the passage became too narrow to stand upright in, and we were obliged to stoop and soon to crawl ; then we stuck fast and with

difficulty extricated ourselves. Esdaile, who was thin, crawled through for a little distance, and found it was but a slight fall of earth at this point which obstructed us, so we set to work from both sides and soon made a passage wide enough to pass through, when we stood upright again. The passage turned to south-east, and then east again, and a few miles farther on divided. One was going south-east and the other due south. We selected the latter, but after traversing it about a mile, the way was completely blocked by fallen earth, so we retraced our steps and took the one leading south-east. In a short time we came to hand-work on the sides of the passage, where the lava and rock had been chiselled and decorated, and a little farther on we came into a great hall like an ancient temple. The roof was supported by fourteen massive pieces of rock, in seven pairs, forming natural pillars which were of exquisite beauty and workmanship. Around these the rock had been cut away so as to form a spacious hall, like the long aisle and transepts of a cathedral. Around this we wandered, examining the beautiful carvings with which the walls and pillars were covered, and at the far end, we saw a slab with a large stone ring let into it, so

as to lie flush with the upper surface. Had this ring been iron it would have become welded in its socket by the formation of oxide, but being of stone it was perfectly loose, so we lifted it, and all four pulled for all we were worth. The slab slowly opened on a stone hinge and lay back, revealing a vault below, which our brilliant lights showed to be another chapel similar in appearance to the one we were in. Each was desirous of being first down, and so again had we to cast lots ; this time the lot fell upon Esdaile, and lest any noxious vapours, or other cause, should render his position unsafe, we fastened a cord or life-line round his waist, by which we could lower him into the vault or raise him, according to an agreed-upon signal. In this manner he descended, and called up to us that the air was quite fresh and sweet ; then he passed out of our view along the ground below.

CHAPTER XII

THE TEMPLE OF ULKA

“Whatever makes the past or the future predominate over the present, exalts us in the scale of thinking beings.”—
JOHNSON.

WHAT was our surprise a few minutes later to see him emerge from behind one of the pillars close beside us, saying, “Come over here, there is a flight of steps leading down”; and there, behind one of the massive carvings on a pillar, was an opening we had previously overlooked, and which led down narrow stairs to a chapel below. The steps were worn into deep hollows with the tread of many feet, probably during long ages past. On reaching the bottom of the steps the first thing we saw was a brilliant shaft of light falling from near the top of the far wall on to a white object at the end of the chapel. Strange to say, this ray did not light up the chamber in any way, but fell as a clear beam through the darkness like the ray from a dark-lantern. It was so brilliant that we could scarcely look at its source, which seemed to be much the same as that given us by Antistes. On approaching still nearer we

found that this light, like our own, was entirely without heat, and that it shone direct on a pedestal of pure virgin marble in the form of an altar of incense shaped like a double cube ; on the top and round the sides were written characters which we could not understand, but judged them to be the names of a deity. About eight or ten yards behind this was hung a tapestry, or veil, beautifully embroidered, and bearing on it sacerdotal emblems, in the centre of which was a sceptre, presumably to denote power and royalty. Approaching with reverential awe, we were about to pass this veil when the delicate fabric swayed a little in the air disturbed by our presence, and so ancient and fragile was it, that even this slight motion caused it to split, and this spread in all directions like the lines of a spider's web, and even as we gazed, the whole fabric, untouched by us, fell to the ground in a long line of fine powder.

The intense stillness and isolation and the consciousness of being so many miles underground, combined with the reverence one feels when in any noble building set apart for the service of the Deity, caused us to pass through the now revealed opening with gentle steps and subdued voices. We found ourselves in an inner

temple, or shrine—a holy of holies—shaped like a true catenarian arch, as was also the roof. In the centre, where the walls narrowed to form the arch, was a white marble altar, but this one was inlaid with gold ; immediately over the altar, set in the keystone of the arched roof, was a second brilliant light, also shedding its powerful beams on the face of the altar, on which stood a chalice of gold set with precious stones. On the sides of this chalice and of the altar were engraved various cabalistic characters, and also some lines in ancient Greek and Latin, which, after considerable time, we deciphered and translated as follows :—“ The light which shines on this vaulted shrine for ever is a type of the beneficent light which shall follow and shine on the soul when it is prepared for the habitations of the Perfect ; and, itself spotless and without stain, it shall be united to its kindred spirits and be clothed with glorious immortality, the radiance of which no less-perfect souls could approach.”

“ It seems as though this shrine either covered or contained the dead, or was used for burial purposes only,” said Esdaile.

“ Probably it was used only for the priests of the temple,” suggested Norris. “ I noticed a

number of pictures on the walls relating to death."

We had not noticed these before, our attention being taken by the bright light and shining gold, so we looked about and found some excellent drawings of people who were dead being carried away by others ; some represented the body or spirit going forward, or upward, on flames and forks of electricity, and others floating on wave currents, illustrated by straight and wavy lines. All this was quite plain to us after hearing what Antistes had to say ; therefore, if the illustrations were correct, as they must be, they proved that these people did not die as we do, but fell asleep and were placed on the ether waves, which translated them to another life. Thus it seemed to be the same here as in the City of Earth, and no doubt the mortal body would be burned as in that city, unless the drawings referred to the body as well as to the spirit, but no drawings specially relating to this were to be seen.

There were many curious vestments which we spent some time examining, but the fabric was so tender that they fell to pieces at the slightest touch. There were also many magnificent vessels and ornaments in gold and

platinum, which would have delighted the heart of a connoisseur.

“I was just wondering,” said Norris, “if this place might originally have been above-ground and the earth piled above it by volcanic action. But everything is carved out of the solid rock, so that is not likely.”

“How do you account for the darkness here and in all the passages, Norris,” asked Esdaile, “when the City of Earth is so light?”

“I cannot tell,” replied Norris, “unless it is that there is no one to join the electro-magnetic waves.”

“That must, of course, be the reason,” said Esdaile; “and the two altar lights will have been made permanently bright, like those on our caps.”

“Look here, my friends,” said Belt; “this passage we came on is not a lava run, or it would have led us to some crater; therefore, a long time ago, it must have been a passage for the people of the City of Earth to use when they came to this temple to worship.”

“And so we are likely to perish here,” exclaimed Esdaile, “or in the passage between here and the City of Earth. We might have climbed a crater, but fine as this is, it is but a gilded trap, I fear!”

We had not thought of this, and now became considerably alarmed, turning from the examination of treasures to the more serious and practical question of searching for an exit. We remembered that Antistes had brought us a good distance out of the city before we came to the opened passage, so that if we retraced our steps it would be doubtful if our combined shouts would be heard, and without proper tools we could not have broken through from our side.

We were much puzzled to account for the freshness of the air, which was as cool and sweet as above-ground. We threw up some dust in many places, but it fell straight, failing to show the direction of the air, but at the spot where a match flame was drawn aside we searched for an opening, and at last found a narrow passage which, after we had traversed for ten or twelve yards, opened out into a large room, that was a perfect laboratory of physics, in which it was presumably intended that those who worshipped or officiated there should also be expected to participate in the mysteries of science, and to trace the goodness and majesty of the Creator by minutely analyzing His works.

The laboratory contained apparatus of all kinds for the estimation of gravity, polarization

of light, etc., models illustrating hydrostatics, hydraulics, mechanics, etc., and in the centre, at one end of the laboratory, stood a large disc of glass, over which was a dome of some bright metal. In the centre of this glass disc was a second disc, but of brass, made to revolve on a long brass standard, to the top of which the brilliant dome was attached by means of gimbals.

The glass disc was raised about nine inches from the ground, and running from the edge of this to within about six feet of the wall were numbers of brass plates, like a platform, terminating at the top of an inclined plane which went steeply down under the floor, like a sloping pit shaft; at each side of these plates and the shaft were thousands of wires which even now were vibrating and pulsating as if from the throbbing of some machinery.

The glass slab was almost certain to be a gigantic insulator for some stupendous physical experiment, and therefore would be safe for us to stand upon, so we stepped up to examine the peculiar parabolic dome, which seemed to vibrate on the gimbals in unison with the wires. No sooner were we on the disc than we were forcibly drawn towards the centre. Esdaile shouted out, "Jump off, or we shall be killed!"

We tried to jump, but could not stir a limb ; slowly we approached the brass disc, drawn with irresistible force. I tried to speak, but every muscle was tense and rigid ; I could only stand and stare at the brass plates and down the shaft, which lay immediately before me on the opposite side. We were now on the brass disc, and the instant our weight rested on it, as though by some arrangement of balance, the glass portion became depressed a few inches, and one of the brass sheets from the other side folded over towards us and rested on the central disc, forming an unbroken brazen footway straight down the shaft. Slowly the disc revolved, and now we were on the brass plate, when the movement ceased, and we were slowly repelled *from* the centre towards the shaft. Some powerful force or machinery had been set in motion, for we were drawn backwards, powerless to resist, straight down the inclined plane, slowly at first, then faster and still faster ; now we were near the wall, now under it, and our brains reeled with the speed and lost all sense of feeling. Unable to move a limb, or even to face our doom, or withstand the terrific speed, we became unconscious.

CHAPTER XIII

A QUESTION OF PHYSICS

“When a man has such things to think on . . . he is not helpless.”—EPICETUS.

SLOWLY consciousness returned, Norris being the first to recover. He found himself on his back, and, as if through a mist, saw his companions lying around him in a deep sleep, and above shone the brilliant parabolic dome. What did it all mean? And then he thought it did not matter, and he again fell into a stupor and slept. He again woke to find us pulling him off the slab.

“Where am I?” he said; “I dreamed I had been gyrating through the earth at a terrific speed.”

“I thought we had too,” said I, “but it cannot be.”

“It seems to me that when we stepped on the disc, the bright dome hypnotized us, and we fell and dreamed it,” said Belt.

“I think that must be it,” agreed Esdaile, “and falling so as to touch each other, the

thoughts passed from one to the other, and all had the same dream."

This seemed the only reasonable conclusion we could arrive at, so we left it at that and resumed our search for an exit, but none could be found except the one at which we had entered.

In our search we came across a curious and unique book, which we appropriated. In size it was about six and a half inches by four inches, and half-an-inch thick. It contained one hundred leaves made of opaque white glass, as thin and flexible as paper; the lettering appeared to be etched, or embedded in, as though with a style, and then filled in level with pigment, but we have not yet found out how it could have been done, as we know of no method of engraving glass except by hydrofluoric acid, sand-blasting, or some such coarse means, nor can even these give the delicate tracery and illumination seen in this book. It is evident that the leaves were engraved whilst in book form, and not on single sheets afterwards bound, for in the book are forty odd sheets still blank, and the records end with an unfinished sentence, proving that the writing was hurriedly abandoned. The pages contain many legends which

we believe to be truths, although so curious that we stand alone in this belief.

To return to our search. We wandered about, looking in every nook and corner, but failed to find any other outlet. The walls were covered with beautiful tapestries, many of which we pulled aside to see if they covered a passage, but at our touch they crumbled to dust, revealing nothing behind but the rocky walls. Then Belt saw a hollow column, on which certain undecipherable characters were engraved, and, dipping into it, his fingers closed on a scroll which, being brought to the light, we found was some sort of map. This was eagerly examined, and proved to include a ground-plan of the very place we were in.

On referring to this map it will be seen that the various cities marked on it all communicate with this temple, which proved our first surmise correct, that this was the temple originally used by the citizens, the connecting passages being clearly marked in black pigment. There are also other markings in red, showing volcanoes, and the passages, channels, or drains by which they were fed; and now, briefly reviewing our journey with the plan, it will be seen that the volcano in the north-west is one of the two

discovered by Sir James Ross. From this volcano (Mount Terror), now extinct, we had reached the next volcano, also extinct ; and no wonder we had lost our way amongst so many inlets ; then providentially striking the only way near a city, we were liberated somewhere near a spot which we marked with a cross on the red line. On leaving the City of Earth, Antistes had broken through at a spot we marked with a cross on the black line, and this passage had led us to this temple, from which there was apparently only one other exit which, if we could find, would lead us to any of the seven cities marked, so we decided to go to the one nearest the south pole, which we numbered (3). Full of renewed hope, we now sought out the opening marked on the plan, and were fortunate enough to find a door near the inclined plane and entrance passage. This door was concealed by a magnificent tapestry which, like the others, crumbled at a touch, and which we had previously shrunk from destroying ; for to have gone round lifting up all the tapestries would have meant a wholesale wanton destruction of magnificent works of art.

We now perceived a passage hewn out of the solid rock, as the sides, roof, and floor

were all chiselled dead smooth and at right angles.

The plan having proved correct, we felt we could now proceed in safety, and so went on full of excitement.

“Does it not seem strange,” said Belt, “that the air here should be sweet and fresh, considering there appears to be no means of ventilation as in the City of Earth, and everything is dust dry?”

“It is more than strange,” agreed Norris, “and to think that here, underground, contented and happy, were, and are, healthy human beings living lives far higher and purer than our own!”

“Yes,” responded Esdaile; “somehow, we have hitherto always associated the earth and its interior with the lower forms of life, and considered that those higher than ours must of necessity be skywards.”

“That is the usual belief,” said Norris, “but it only goes to prove that the Creator provides for all and ‘moves in a mysterious way, His wonders to perform’; the whole thing is beyond comprehension.”

Thus we talked, without any fear of the future, or doubt as to our ultimate safety,

continuing our journey in the utmost confidence, when our hopes were again dashed to the ground, for, after walking some hours, we encountered sulphurous fumes which almost choked us, and through the smoke beyond we saw a glowing mass of molten lava. On retracing our steps for a short distance, and referring to our plan, we saw that a volcano feeder crossed above or below the passage we were in.

“This feeder, which originally crossed over or under this passage,” said Norris, “must have burned or broken through, and the volcano marked here may now be spouting out tons of lava.”

“As this seems to be the only passage out of the temple,” said I ruefully, “it looks as if we should have to remain there, or go back to the city we have left and risk getting out.”

“I fear that is our only hope,” said Esdaile. “What do you say, Norris?”

“It does seem like it,” answered Norris; “for some time I have been wondering why the temple has been abandoned, but I think this can be explained. If the lava broke through between the services it would forever prevent the people from returning by blocking up the passages——”

“That might be,” interrupted Belt, “but why could not the people from the City of Earth use it?”

“Probably,” replied Norris, “when the lava broke through, it would drive before it dense asphyxiating fumes, which filled the temple, and the passage beyond, and on to the City of Earth, and the people there, guessing what had happened, and fearing the lava might follow and flood their city, filled up their end to save their lives.”

“I think you are right,” said Belt, “and if that were the case, the city would no doubt be gradually extended away from that spot, and so its presence as a way to the temple would be lost in the name of volcano channel, which it would be considered to be from that time.”

“Arguing on those lines,” said Esdaile, “it is probable that the temple is not so old as we thought, for the gases, some of them corrosive, may have acted on the fabrics and made them rotten.”

“That may be,” said I, “and yet Antistes had no recollection of the passage being anything except a lava drain, and then, this plan is really very old indeed. Since it was

drawn up some of the volcanoes have become extinct—Mount Terror, for instance, and the one communicating with it, which we passed through.”

Unable to proceed farther, we returned to the temple, with the intention of retracing our steps to the City of Earth, but before leaving, we took some photographs by the aid of our magnificent lights. Then we took a final look at the apparatus in the laboratory. These were very wonderful, most of them quite unintelligible to us. Providentially, one of them particularly attracted our attention, and to this we owed our deliverance eventually, but we were some time before we could understand its use.

It was something like a horizontal galvanometer, the scale being circular and having its edge bevelled and numbered, the coils of the instrument being wound in such a shape as showed the needle in true proportion to the current. Attached to the side of this was what looked exactly like a mirror-sextant with telescope, graduated arc, and vernier, and at one side of this were two separate standards, each carrying a triple radiometer, whilst the opposite side was connected with what looked

like an immense wave apparatus. All these various forms of physical apparatus combined in one instrument seemed very complicated and difficult to understand, but after trying to work it in all conceivable ways, we found it was an instrument for demonstrating the molecular theory of ether permeating nature. By its means we could prove that ether passed round every atom in nature, just as in a sieve each hole may be considered the atom and the wire surrounding it the ether. Every object in nature being composed of separate atoms, we could, by means of this instrument, prove by actual demonstration, that however tightly these atoms were packed together, making a more or less solid whole, there was always ether between them ; also that the ether, being caused to move or pulsate in a greater or less degree than was normal, these atoms (which are spherically round and *always* pulsating with the ether) were driven farther apart or drawn nearer as the ether was expanded or contracted by heat, cold, or any other means ; the spherical atoms would then glide smoothly over each other, like globules of quicksilver, but without coalescing.

The wave apparatus divided the ether

waves, illustrating and measuring the undulating, oscillating, progressive, reflected, and stationary waves, so splitting them up that any one set of these, or several sets combined, could be utilized. By using this instrument we found it possible to project solid objects through other solid objects on utilizing the natural electro-magnetism of the surrounding ether and causing the separate atoms of the one object to glide, without collision, along the waves of ether between and past the separate atoms of the other object.

Thus a solid object like a flagon could be made to pass through a larger flagon, each being full of liquid, without losing or even changing their contents and shape.

For hours and hours we experimented with this most fascinating instrument, till, glancing across the room, Esdaile exclaimed excitedly, "We have forgotten that glass slab there, which hypnotized us! Look at all those wires running down the tunnel! Surely that also is a wave instrument on a big scale." We all went towards it, and although quite different to that we had left, it certainly seemed as though made for a similar purpose.

"Is it possible," I exclaimed, "that we were

not hypnotized, but projected somewhere on ether and brought back again?"

"If our dream was no dream, but a reality," said Norris, "then we ourselves have been atomically divided, and have gone through the earth to somewhere, and back, as separate atoms, which have either never changed form or have been re-united in the same form!"

These were thrilling suggestions, for if we could pass on ether waves through anything and everything, without collision, what might not the discovery lead to?

Not caring to risk a second personal demonstration of the powers of the instrument, and wishing to see actually how the thing worked, we placed a kind of small cabinet on the disc, but nothing happened. We gradually altered the position of the cabinet, with no result, until it was placed so as to be in a line with the projecting wave apparatus, when it was slowly drawn towards the centre. What caused this could not be seen; magnets could not attract it, as it was made of some kind of wood or fibre, nor could it, of course, be hypnotized by the brightness of the dome, but whatever the source of power, the cabinet was drawn to the disc and slid

down the inclined plane as we had done. Our powerful lights penetrated to the end of the shaft, and we distinctly saw the cabinet rush to the wall, touch, and pass through it, without the slightest movement of wall or cabinet, and without leaving any trace of its passage.

In a few minutes the cabinet reappeared *through the floor* of the laboratory, passed just over the disc, and again disappeared down the inclined plane, this time with great speed; and so it continued, appearing and disappearing time after time, rising in the air as the speed increased till its legs were about six feet above the slab, and its entrance and exit were so rapid that all form was lost, as seem. the spokes of a rapidly-revolving wheel. Then it slowed down, and the height became less and less till the legs barely missed the disc and the cabinet passed slowly out of sight; the next time round it touched the slab and remained there.

Close by was a heavy chest made of fibre and iron, so heavy that our united strength was only just sufficient to move it; we eventually succeeded in placing this on the slab in the same position as the cabinet which we removed, and saw the movements repeated, which

proved the enormous power of the instrument. We ourselves had therefore been gyrating through the earth in this way! No wonder we were unconscious; but was this due to the gyrations, and dizziness caused by them, or to some result of the passage of our atoms through the earth on the ether waves? It was impossible to say.

CHAPTER XIV

A JOURNEY ON ETHER

“Can such things be,
And overcome us like a summer’s cloud
Without our special wonder?”

SHAKESPEARE.

THIS gigantic experiment in physics was rather too powerful and startling to be played with, so we returned to the smaller, and so far less formidable, apparatus.

We experimented with this in various positions, and found it answer equally well anywhere, but the question was, could *we* be projected anywhere by it, and if so, how far? for it would be awkward if the force gave out in the middle of the earth, or in the heart of a volcano; if we were smothered, or if the atoms should be so tightly packed together by contraction in passing through ice that our own atoms crushed us to death. Belt, in his usual impulsive style, insisted on trying it, but we persuaded him to help us to gauge the force and direction of the thing, after which we decided to cling to each other and go as one

solid object instead of four separate bodies, so that, whether we lived or died, we should be together.

We now returned to the glass disc on which the box was still standing, but not where originally fixed; on repeating the performance, we found that at its fastest the chest slightly swerved from its original direction, then the disc stopped it. Could the disc, therefore, be an insulator of the ether waves? Afraid of going too far with this instrument, we got the box away to try if we could attract it to the smaller apparatus, which we could readily do if placed to the south of it, but if it was placed to the north, and the apparatus to the south, the box was repelled to the north—thus going to the north in either case. Therefore, if *we* were to become the object, we should also be dispatched to the north, whatever our position in relation to the instrument might be. Could we insulate the magnetic waves by some means? If so, we might, with the sextant, project the force at any angle; so we rummaged all over the room, soon finding some material which resembled glass. We placed a sheet of this behind the instrument, and then found that if the glass was placed at the back the forces

were projected *from* the instrument in the direction in which the sextant pointed, the instrument itself not being subject to any other forces.

Now the glass was behind it we saw a wonderful change. The telescope, which before had only shown the other end of the room, now showed through the earth, on the ether waves, which separated the atoms. Pointing the telescope to the north-west horizontally, we saw inside the City of Earth, with the people there; elevating it a little, we saw our own ship, and between came Erebus and Terror, with our men at foot and top of the latter. How we longed to talk to them! In great excitement we all looked in turn, each impatient to get a glimpse and sweep the world in all directions. To give all an equal chance, we had turns of five minutes, and time after time we each thought that the others were having a far longer five minutes than ourselves. It may be guessed how we almost devoured the earth; we opened the plan and found it correct in every detail. All the cities and volcanoes marked on it were distinctly visible, but some of the volcanoes were now extinct. But the most exciting thing of all was the sight of the

barrier of ice marked on the plan, and the lovely forbidden country beyond. If we could only get there!

Norris exclaimed, "It seems like personating Moses of old, who was permitted to see the promised land, but not to enter."

"I was thinking something like that," said Esdaile; "the plan says this laboratory was for the priests only, so they alone were permitted to see beyond the veil, but probably not pass."

"If what Antistes said is correct," said Belt, "the holy men here would be in a far higher grade than the Sons of Earth are at the present time, for these could *see* beyond, whereas they only *heard* of it, probably originally from these very priests, and that so long ago as to be merely a rumour or legend to those living there now."

"It is likely too," said I, "that the nearer to the barrier, the higher the life."

"I should not be surprised," said Belt, absently, fixed at the telescope as though glued there. "I feel as though I could look through this thing for ever!"

Indeed this was the feeling of all of us, as we absorbed the glories of the various places through this ether-wave telescope.

Then we fixed the chest in front of the apparatus with the telescope placed horizontally, and connected the radiometer. Instantly the box shot off through the wall, a solid thing ; we waited, and it did not return. It had been projected horizontally, and so must have gone on in a straight line, and so would still go, ever on and on along the ether waves through boundless space, even through any star or world it might meet with in its course, being subject only to the particular waves on which it had been projected.

Dare we trust ourselves? Yes! we were ready to dare and do all in the cause of science and knowledge, and so the sextant was set with the telescope pointing to a prominence just inside the ice barrier, against some trees, or so it seemed to us. This was tested by all in turn as a check on the position, and we were nearly ready to start when Belt said—

“ If we are projected through the ice into the open country beyond, how are we to stop at this prominence? Shall we not go through it, and on and on till we die? ”

“ Probably we shall,” said I ; “ but we must risk it.”

“ When first we started from England,” said

Norris, "and again on Mount Terror, we four agreed to get over this desolate, storm-riven country to the South Pole, or die in the attempt, and I for one intend trying this apparatus, and going on the mere chance of landing there. Are you all with me?"

"Ay!" said we all.

Then Esdaile said, "Before we start, let us ask Heaven to bless us in our undertaking. You are the oldest, Norris; do you take the lead."

We therefore knelt down, and Norris prayed—

"Oh, God, at whose creative fiat all things first were made, Who art the protector of all who put their trust in Thee, we humbly beseech Thee to look down upon us who kneel before Thee, asking Thee to endue us with such fortitude that in time of trial we fail not, but passing under Thy protection through the valley of the shadow of death, we may rise to safety and be the means of unfolding the beauties of Thy kingdom, to the honour and glory of Thy holy name."

We then rose, unstrapped and put on our furs, and connected the radiometers. Norris put one of the pieces of glass between his buttoned coat and waistcoat, in case it might be useful in bringing us back again, and then,

fastening his coat again, he belted his fur overcoat, and we all fastened our alpenstocks against our sides. All joined arms and hands in a close embrace, then moving swiftly before the instrument as one solid body, we felt ourselves suddenly lifted off the ground and flung forward with sickening force ; then all was blank !

CHAPTER XV

BEYOND THE BARRIER

“The beautiful was there
Triumphant.”

TALFOURD.

OUR senses returned, with a feeling of great exhilaration and added strength. We found ourselves lying down in the open country, which was entirely free from ice; in the air was a keen, healthy frostiness, such as is felt on a clear morning in early spring in England. Far behind us in the distance lay what we took to be the ice belt—a faint line of beautiful blueness, scarcely perceptible except as a mist—and in the intervening distance lay glittering water, like the sea, and rivers, broken here and there by undulating country, sandy and green and shrub-grown, all bathed in glorious sunshine.

Turning round and looking due south, the country was beautifully wooded and summer-like, and, even a few yards away from us, some lilies-of-the-valley were just opening their delicate white blooms in modest purity amongst the green around.

Just beyond these was a mass of wild violets, and forward, as far as the eye could reach, were wild flowers innumerable, making the whole country one blaze of iridescent colour, as the breeze altered the angles of light, or showed a fresh phase of the flowers to our gaze. Such were our first impressions; and there is no wonder that we looked around in raptured enjoyment, too great for words. The silence was broken by Belt saying—

“What a peculiar perfume in the air! It smells like chlorine.”

“It is ozone,” said Esdaile, “and in great quantity.”

“Yes, it is ozone, sure enough,” assented Norris, “but what puzzles me is how we have stopped here. Did the machine give out at this point, or what has pulled us up instead of our going on through and past everything?”

“It does seem remarkable,” said Belt; “the same ether waves on which we came will go onwards through all creation, and I, for one, thought that when we started we were doomed.”

“Look there,” said Norris, pointing to a small eminence about a mile away, “that is the very hill we aimed for! See that little patch

of metallic ore, or something, which we saw through the telescope, gleaming as it does now."

"It is undoubtedly the same," said I; "we must have been shot here as straight as an arrow. Whatever can have stopped us? I also thought we were going straight to kingdom-come, when we left the temple."

Try as we would we could hit upon no possible explanation, for a child could see that if we were once launched on ether waves, each atom being on one or more waves, those waves would also be passing between other atoms which would glide over each other without collision. So that until something happened to change the mass, all the atoms of which we were composed would retain their form and pass, without being pulled up, through the whole universe. This had so far been proved, for we *had* passed through earth, ice, water, and air, and still retained our shapes, and having passed through the midst of all these elements 'safely so far, what had stopped us?

We gave it up and wandered onward again, taking off our furs to strap them on our backs, giving ourselves up to the complete enjoyment of a country ramble across hedgeless fields

filled with glorious flowers bewilderingly lovely, the air becoming warmer and still warmer as we advanced.

Never had we felt so healthy and vigorous, never had it seemed so glorious to be alive; the life and strength of manhood coursed through our veins with tremendous force, increasing our mental faculties until we felt that the most abstruse problems would be as nothing to us, our minds being able to cope with any effort, whilst our physical strength felt equal to any demands. How good it was to live and be able so thoroughly to enjoy all that lay before us!

“We must have walked twenty miles, if a yard,” said Belt, “yet all of us are as fresh as these flowers. If I don’t do something to let off some energy I shall go off with a pop! Let us have a game at leapfrog.”

In less than a minute we were all jumping over each other’s backs like wild school-boys, clearing not only the backs, but the parcel of furs on each, which added considerably to the height, and this we kept up till breathless, when we sat down to rest.

“I wonder how long we have been here,” said Norris, unbuttoning his coat to look at his

watch, when out fell the piece of glass brought from the temple. "I had quite forgotten that," he continued; "but how it has changed! It was quite transparent in the temple, and if you remember, we could neither break nor bend it; now it is as opaque and flexible as india-rubber;" and he handed it round.

"It is probably the juice of some tree or root," said I, "which is transparent when cold, but becomes opaque and flexible when warmed, as this will have been by contact with your body."

It had now gone the round to Norris again, who looked at it long and earnestly, and then said, "See, it is getting softer and stickier, like burnt india-rubber; but india-rubber could not be made into hard, solid slabs as clear as crystal."

Even as we watched it was slowly destroyed, and finally no trace of it was left. Here was another mysterious thing for which no one had a theory, till Esdaile laughed and said, "I believe, after all, it is quite simple! Ozone, as you all know, is a condensed form of oxygen, and is produced in the passage of electricity through the air; this air is rich in ozone, and has acted upon the rubber-like stuff and dissolved it."

“Good!” said Norris; “ozone is allotropic oxygen, and as we know, has a way of attacking organic substances in a violent manner. It will instantly destroy a piece of india-rubber pipe if passed through it.”

“One to you, Esdaile,” said I. “And this stuff being probably the sap, or gum from roots, and of the nature of india-rubber, has been acted upon by the ozone of this air; slowly whilst under the protection of Norris’s coat, and rapidly whilst in the open air.”

“I think we shall have to accept that as correct,” said Belt. “I wish we had thought to look at the piece of glass when we woke up here, as I have an idea it is the cause of our fortunately stopping here, instead of being some millions of miles through space.”

“How so?” we asked almost in the same breath.

“You will remember,” he continued, “that before we used the slab in the temple, the machine would only pass one thing through another for a distance of about eight feet, and there its power ended, but when we used the glass, the chest went through the wall. Also, without the slab of glass, or what we took to be glass, we got a *repulsive* force from the

south to the north, and could not come south at all. Now, supposing this excess of ozone destroyed the nature of the small slab Norris brought, would not that pull us up by setting up a repulsive force?

“Excellent idea,” said Norris; “but the slab has only just gone, and we must have been here at least eight or ten hours.”

“When we regained our senses,” said I, “we were miles and miles inside the barrier, so we had come an immense distance. This could be accounted for by the supposition that the slab, being partly protected from the air, was not acted upon at once, but in a short time had its influence annulled, and so the particular ether waves which, in the temple, repelled from the south, reasserted themselves and became repellent, as before, bringing us to a stand.”

“If the large slab behind the machine sent us south, in spite of the smaller slab being opposed to it at the other side, would not the removal or annulling of the smaller one incline rather to send us faster on our journey than before, there being no resistance?” asked Norris.

“That is a point, certainly,” remarked Belt; “but if you recall, the hill we aimed for, which

in the temple seemed immediately inside the ice belt, was at least a mile beyond us when we awoke, whilst the ice belt was so far off behind us as to be too indistinct for us to tell what it really was, even in this rarefied air where distances are difficult to judge. We had, therefore, come an enormous distance within the belt, and it is possible that the instant we reached this ozonic air, it altered the nature of the slab and at once commenced to pull us up until we stopped."

"Whether this was the cause or not," said Esdaile, "we must be thankful we are here, and we shall be fortunate if we can find some means of returning to the ship on similar waves."

CHAPTER XVI

THE GREAT HEART OF NATURE

“Speak to the earth and it shall teach thee.”—JOB.

WE journeyed onwards, keeping due south, and after a few miles passed through a wooded dell, along which ran a murmuring stream teeming with fish. Here we again became conscious of a peculiar sensation as of other beings around us, but we could see no one. However, as we came to the head of the stream where it arose out of the ground in a clear spring, we saw far ahead of us, and approaching our way, a girlish figure clothed in white, and, as men usually think that if a girl is near she must perforce be after them, we thought she was coming to meet us, nor were we mistaken. As she came nearer, we were awed into seriousness by the radiance and beauty which shone from her as from a divine being. Before her face hung a veil which enveloped her whole body, and through this could be discerned her well-chiselled features and a form of surpassing loveliness. So overpowering was the radiance

of this figure, that we all stood still and blinked.

“Fear not,” she said in English. “I know you, whence you come, and whither you would go.”

“Who and what are you?” asked Norris.

“I am sent to you to be your guide and counsellor, and lead you to higher and nobler things.”

“You speak English; how is that in this place?” I asked, amazed.

“What is one language to me more than another?” she gently answered.

“Are there any other beings here?” I ventured to ask; “we feel that we are surrounded by them.”

“So you are,” she replied. “You yourselves are but one very small portion of life. All the trees, plants, and flowers have individual lives, each working out its own destiny.”

“Surely the trees are not human?” Belt exclaimed.

“Not as *you* call human; that is merely a term given by yourselves to a certain form of life. Vegetation is but another form, and in many respects far higher than man on the earth is now. Every flower and tree growing up from

its seed, or childhood, to old age, labours and nourishes itself from the world around it, though perhaps not as men do, but does it all the same, thinking carefully what to take, and what to avoid, and so living that it shall be a glory to its Maker. In fact, it grows to greatest perfection where man does not live."

"I thought that man was the highest form of creation?" said Esdaile, surprised at this view of life and nature.

"By no means," answered our new acquaintance; "he should be, he was created so, but has sadly fallen! Flowers and trees have not fallen, and so every tree, flower, and every blade of grass that grows is far higher than man as he is now, although the time will come—and for some almost now is—when man shall have risen till he is as he was originally intended to be. *Now* he is so surrounded and beset by his own folly, that he cannot grow and give that undisturbed service and adoration to his Maker which the rest of nature gives."

"Kindly explain to us," said Norris.

"Has any man the beauty, purity, and gentleness of the lily, or any other of the wild flowers that he despises, but which grow and grow the more lovely as they unfold their bloom, giving,

as a daily offering to God, the sight of their glorious tints and colouring, and the perfume of their fragrance? And man, in his ignorance, himself tries to cultivate these, to graft one on another, till he forces these lovely things to become grotesque monstrosities, or mixtures of several monstrosities. Not content with that, he wantonly plucks God's fairest blooms, teaching his children to do the same, and for what end? Merely to let them wither away, uncared for and forgotten, when the whole of nature sadly needed their fragrance and colour; and so nature is defiled by blooms lost and withered before their time, and mourns for them. Nor do the trees escape. Each tree is a living, breathing thing, like man, and yet he will pluck and tear off limb from limb in order to get a piece of its fair bloom, or to procure a wand with which he himself, or his children, can swish and cut off, in the pride of their life, far more flowers than would be possible without some such scythe."

She paused, her eyes filling with tears at the sad reflections, and then continued, "Man is ever false; even when he praises his Creator he is false, for he will ask for wisdom to be given him, and wisdom is sent, whispering in

his ear the course he ought to take, and showing him what to do in every step of life ; but he will not listen, though wisdom would gladly prove a very chain of jewels round his neck, and would hasten his everlasting bliss by showing him the way to see his Maker face to face, but he prefers to suffer and learn in his own thorny way, rather than in God's flowery path," and again her tones became very sad. As we did not speak, she continued the previous comparison, " There is nothing of this in other lives in nature ; trees, plants, and animals all do their best to live long and well. Even your oxen and sheep will enjoy true life to the full, though in the doing they be merely making themselves ready for the sacrifice to which man will force their submission." Here came another long pause, which we feared to break, and just then a bird in the tree beneath which we were resting began to sing its liquid, heavenly song. We all listened to its sweet tones in silence until it ceased singing, when our spirit guide continued, " Amongst the worship of your fellow-men, have you ever found the simple, heavenly sweetness of nature's own adoration to her Maker which you will find her always offering, more noticeable in

the quietness of early morning and dewy eve? When perchance you are alone, amidst the fields, flowers, and trees, at eventide, and there comes into the air the solemn silence of a world asleep. As the dew falls all nature opens her lips in a sweet murmur, gentle and soft as the love-coo of a dove, and then the whole earth whispers a last prayer for safety, and with a sigh of contentment and love nature sinks down to a sweet, dreamless sleep on the heart of her Maker. And then, just as you are perhaps turning away, with sweet and solemn thoughts, there comes on the breeze a sigh like a psalm of thanksgiving, swelling and unfolding itself until you are spell-bound. What is it? Only a shy little bird, too shy to sing freely till the light has faded and it is alone with nature and its God—but now it is dark, or nearly dark, it need not fear, so it speaks, trilling and singing, first like a flute, then like a violin string, pouring out its whole soul in trembling, sobbing thankfulness. Then, as the beauty of life is felt and the knowledge that though all around is hushed and silent, yet every blade of grass, every flower and leaf, and all life is silently praying, the voice rises loud and strong, singing from a full heart; and now, with a throbbing which

comes from a heart almost bursting with love and adoration, its prayer is ended and all is still.

“Have you ever heard men plead to God as other of His creatures do, and praise Him as this small bird is doing?” No one answered. How could we? So she took up the story again, “Have you ever been amongst the fields and trees in the hush of early morning, when the earth is darkest, and seen a faint streak of light come and stretch itself across the sky like a silk ribbon? And at the sight heard a rustling amongst the trees close by, followed by a gentle twitter, as though some sentry-bird had been awake all night on the look-out for the sign in the heavens? Then other twitters are heard, first on one hand, then the other, and soon a few birds hop to the tree tops and others follow, to see if the streak is really there, and to be nearer the heavenly sign. Then commences a song of thankfulness such as no human throats could approach for purity, and at the sound the grass moves, mice and insects wend their way through the blades, shaking down the dew, which trickles to the roots. The big trees also, feeling the stirring life upon them, rouse up, rustling their boughs

and leaves in sweet awakening ; the disturbed wind begins to sigh and, with a gentle swell, passes on to tell the whole of nature that day is near. And as the light creeps on, there comes over the human mind an awed silence and a flood of holy thoughts. It is only the morning prayer of nature, the first-fruits of the dawn ! And the wind, coming at first very low, touches everything with a gentle kiss, rising into the trees and all vegetation, awakening them with a sweet caress, and now the vegetation drinks in the heaven-sent dew ; the humming insects, rustling trees, and singing birds join in one united chorus of loving praise. Oh, that man could give his Maker such pure, unsullied praise as that offered by nature ! And yet he in his folly will not learn that the whole of creation (of which he himself is but a minute portion) is the work of God Himself.”

CHAPTER XVII

THE GROWTH OF A LIFE

“For we are but as yesterday and know nothing.”—JOB.

OUR spirit guide here paused, and observing that we were all silent and depressed, she asked, “Why are you sad? What would you?”

“We are sad that we know so little, and would know more,” answered Norris.

“I am here to guide you, else would you fall, for the way is full of danger to you.”

“Are there any people here?” asked Belt.

“Yes, many; but all invisible to you,” she answered, “although they can see you.”

“If that is so,” asked Esdaile, “how is it we see you, and why can we not see them, being ourselves visible?”

“Antistes told you that the people here are on a different grade to yourselves, and invisible to any of much lower grade, although *we* can see all grades less advanced than ourselves. By your skill in finding the working of the wave currents you came from the temple, the temple of Ulka, into this country forbidden to

you; and had you come in any other spirit than that expressed in your prayer, you would have died before getting sight of this land. As you came in this spirit, several of us begged our Master to allow us to become visible to you and guide you, lest you should penetrate too far, and I was selected, so that for a short space I am visible to you in the flesh, although I dare not become entirely so lest my brightness should blind you."

"What caused us to stop here instead of proceeding on the ether waves?" asked Norris.

"The providence of Heaven, in giving you the suggestion to bring the tablet which the air destroyed," was the answer.

"Then could any one come here by such means?" asked Belt.

"Yes," she replied; "but they would soon perish; being out of their sphere, they could not live. In the case of those who come naturally, the spirit rests here; but should any like yourselves enter, they would pass through and on till they died, or if they brought what you did and so stayed here, the air itself would soon burn them up, nor could we save them."

"Then are we to die here?" I asked.

"That I cannot say," she replied. "You

will only be able to make a brief stay, as the strong ozone in the air would cause you to live out your lives in a comparatively short time."

"Could we see these other people?" Esdaile asked.

"I fear not; but if you have faith and a pure and holy motive, then it may be possible. Search out your hearts, and if all you desire is to glorify God, and not to seek the adulation of men, then your prayer may be answered." Saying which she stepped apart.

Feeling that our motives were pure and good, we prayed that our eyes might be opened. As if in immediate response, where had previously been wooded dells and beautiful pasture-land were now mansions and other residences, and we were actually on the outskirts of a beautiful city. Also about a dozen or more people were journeying towards this city, who, perceiving that they were about to become visible, had veiled their faces like our guide, who now came up smiling and said, "Your prayers are answered; God is good!"

Mixing with these people, we entered into conversation with them, and learned much ere we reached the city.

"I do not understand how it is that you can

have cities here which now seem as substantial as anything can be, and yet were previously invisible to us," remarked Norris.

"That is simple," replied the one addressed. "You know that only with regard to lives below you is it possible for you to understand what ensues after death, but no life knows *its own* afterwards; thus the caterpillar is not aware of the glorious butterfly it will eventually become, nor can you be aware of what may pass in the glorious unknown unless your eyes are opened, as they now have been."

"Why do we have so many desires unfulfilled, so many wasted lives, and why is the future so relentlessly hidden from us?" asked Esdaile.

"No desires are ever unfulfilled, no lives are ever wasted," the man replied. "Take a lesson from nature around; the flower blooms, sheds its fragrance around, and wishes to continue doing it, but instead, it fades, closes up and runs to seed, thinking its life ended. In reality, it has only just begun, for unknown to itself at the moment, its seed brings forth a newer and better life. Thus it is with man; he lives and works and dies, and that *seems* to be the end, and all his thoughts, and kind and holy aspirations apparently end in failure—the flower has

bloomed and withered ; all closes up, and there follows a hard and bitter shell of fruitless work and blasted hopes, when he had longed to do so much ! But is it so ? No ! For in the next life, the shell bursts ; every good thought, every high ideal, desire or aspiration, becomes a separate seed which bears fruit a thousand-fold, and so it goes on from life to life, each existence being a gradual preparation for eternal perfection."

"What is at the root of the sins of men?" asked Belt.

"Every unholy and harmful thought is also like a seed," he replied ; "these are in the shell with the others, and when the shell is broken all take root, and these bring forth weeds which must be plucked out in the next life, or they will strangle the delicate bloom of goodness."

"How long do these effects continue?" I asked.

"Until all harmful and evil desires are so completely banished," he replied, "that when the life is ended, there is not the germ of a single weed in the shell ; all have been forced out root and branch, and then, in the following life, the seed brings forth nothing but healthy bloom and eternal perfection."

“And then? What is done in eternity?” asked Esdaile.

“That does not come within our knowledge. As we extend our lives, the knowledge of the previous existences becomes more acute, till we soon remember them all, profiting by the mistakes and sins of ignorance, committed before, but no one has knowledge of the future.”

“Have you no means of finding out?” asked Belt.

“We do not wish to do so,” he answered; “we are quite content, and shall reach the higher degrees in due course; in the meantime, we do not desire to know secrets not yet committed to us.”

“Are there any other places in this country where people dwell in even higher circles?” I asked.

“Yes, there are,” he answered; “we believe there are some who live by merely breathing the air, and some who are in the body as we are, and dwell around us, but we cannot see them, and even these are not yet perfect.”

“Why do you not ask to see them?” asked Belt. “Your prayer, like ours, would be answered, would it not?”

“We cannot tell, but we have no such

desires. You must remember that the request of a new disciple for some visible sign to give him more enlightenment and love, would be a doubt and weakness, if not an actual sin to one who should not ask for it, and who has had so many opportunities of proving God's love and kindness that he knows the Divine actions are infinitely above even honest doubt and fear. During the countless ages of the past, God has led us so well, that we leave the future with Him without an anxious thought, because we *know* and are quite sure He will not be satisfied till we are like Him. Therefore, every moment of our lives we do all we have to do in the most perfect way we can, using every effort to become more proficient."

"Are you nearly perfect now?" I asked.

"Would that we were!" was the sorrowful reply, "but we feel sometimes as if there are other and better beings round us, giving us hope, and this is a great help and comfort."

"How do these beings live?" asked Esdaile.

"I cannot say; probably in temples not made with hands, but see, here we are at the city gates; abide with us."

And so we all entered together, going to the house of our guide, who now rejoined us.

CHAPTER XVIII

A VISION OF LIGHT

“God gives sleep to the bad in order that the good may be undisturbed.”—SADI.

HAD these people been seen in pictures they would have been called angels, although they had no wings. We would each have given a great deal if we could have died to our own life to become one of these people, but we knew there is no royal road to perfection, and had we died, we should still have been in a far lower grade than they. We felt there was as much, or more, contrast between them and the Sons of Earth as between the latter and ourselves, so that now we were quite perplexed, almost everything being beyond our comprehension; but these people were very kind and modest, speaking and explaining the meaning of things as if to children—which in learning we were.

To add to our bewilderment, we found we had here reached a city of colour, where the people lived and worked in the most magnificently coloured surroundings it was possible to imagine, dazzling to our earthly vision.

On entering the house of our guide we became aware of a change in the clothing of our host. Up to the present this had been a pure white, but now it appeared a beautiful golden yellow, shimmering and scintillating as if composed of gems which were sparkling in the sunlight. Many of her friends had also entered, and she soon placed before us a peculiar food made of mixed fruits ; but we could only eat a few mouthfuls of it, and that did not agree with us, so we fell back on the food given us by Antistes, after which we became thoroughly drowsy, and one after another we dropped off to sleep, in spite of the fact that we were in the midst of conversation with our new friends—which seemed anything but complimentary to them. Either the altering colours of the costumes or the mixed food had a hypnotic effect on us, and against our wills we lapsed into a deep and long slumber.

What really transpired during this slumber will never be known, but in our dreams we each saw before us many angels with faces and heads covered, all bowed down as if in prayer, and we knew they were praying for us, that our lives might be spared and that the brightness

and glory of God, which we were not pure enough to see, should not destroy us. And in our dreams we saw the room filled with light—a glory—a light that hurt and scorched—and the angels turned towards us and we saw their faces, and the divine radiance shining from them was like the sun at noonday, too dazzling to view. Then we cried aloud in anguish and begged for some place in which to hide ourselves from the glory. All the angels covered their faces and broke into a song of thanksgiving to God for His goodness. Although the song was not in actual words, yet we strangely enough seemed to understand it perfectly. It was a wonderful song, beginning with thanks to God for the promise that whosoever is faithful shall partake of the fruit of the tree of life and live for ever, and that they themselves would taste of and know the secret of life which He had promised to make clear; and lastly they gave thanks for the sparing of our lives and that our eyes were opened, and for all the mercies showered on the whole of creation with such a lavish hand. As the song ceased, dying away in softest murmurs, there floated on the air most ravishing music and a gentle voice of wonderful sweetness. What

passed could not be understood by mortal ears, but all the angels knelt in silent adoration, and when the voice ceased there seemed to linger in the air the sound of distant music, and we dreamed that the angels had held direct communion with the spirit of God, whose voice had set all nature atune with a joyful song. We dreamed that the angels arose from their knees, and we saw that some flowers close by, which had been in bud, were now opened, as though having burst into bloom at the sound of the mystic voice. The birds also were now warbling in bewildering chorus, all things in nature vying with each other in loyal and happy praise.

At last we awoke, and all in the room seemed as before, except that now the costumes of all the people were radiant as that of our guide and host. Of course it was only a dream, induced by our surroundings and thoughts! The birds *were* singing, and the flowers growing close by were in full bloom, but that was merely a coincidence, and the birds' song had perforce come into our dreams whilst waking us.

Dream as we knew it to be, we could not altogether shake off the recollection, and it was with mingled feelings of reverence and fear that

we apologized for the weariness which had so suddenly come upon us, after twelve or fourteen hours of continuous walking.

We then began to question our new friends as to their work, method of living, etc. Like those of the City of Earth, they lived in community, and having no intercourse with any other city, were entirely self-contained, making and growing for their own use and consumption only, and spending the remainder of the time in study and research.

The previous lives they had lived had eliminated all vices, and they now communed together without any selfish desires ; all worked together for the general good, in their several ways being equal in intelligence, capabilities, and desires. They all had a certain mission to perform, which they strove quietly and steadily to complete, and when this object was accomplished they passed into the next and higher life.

“ Do you not die ? ” asked Norris.

“ Not as you know death, ” answered one. “ In earlier lives death is often looked upon with terror, but that is a mistake, for it is only a case of going to sleep in one life and waking in a nobler and better, and the body is left behind

as a useless thing, like the chrysalis of a butterfly, or a snake's skin. As the lives progress we learn better, and know that to die—as you term it—is a decided gain to us.”

“Do you know when this change is coming?” asked Belt.

“Oh, yes,” was the reply; “we hold almost actual communication with the Master, and when our work is finished we prepare to pass away.”

“In what manner?” I inquired.

“We have great rejoicing, and form in procession, all the city doing our companion honour; he then goes to sleep on the ether waves, which carry him to the city where the next life is spent, and after working out the life there the soul is again translated, till finally the secret of life is communicated to it; we do not know how, only that it is so.”

“How long do you live here?” asked Esdaile.

“Until our work of this life is finished, and our lesson is learnt, when we pass away.”

“Where is this city containing the fount of life?” asked Norris.

“Far away in the south,” was the reply, “but it is forbidden country and dangers beset the path, except for the passing soul.”

“I suppose, as you recollect so much of your past lives, all languages are equally clear to you?” said I.

“Language is but the expression of thought,” was the reply, “and knowing your thoughts we can tell what you wish, although you could not understand us without speech, but we understand all languages.”

“What language do you speak amongst yourselves?” I again asked.

“The language of thought only. All our thoughts are open to each other, and we read them as you would read a book.”

“Is not it awkward at times,” asked Belt, “for others to know what you are secretly desiring?”

“No,” replied our guide, innocently. “Why should it be? Each one is only wanting the others’ good, and we have no secrets. What secrets could we have?”

Belt looked a little nonplussed, and said, “I am afraid many of us would not like our inmost thoughts to become public property.”

“Why not?” was the response. “If your heart is pure, your thoughts clean, and desires holy, there is no reason why the whole world should not know them. In fact, it is better

that all *should* read them, for the life is not only brightened by knowing that others are working for the same object, but also by the fact that when the time comes for the hearts of all men to be opened, and their contents revealed, there would then be nothing to regret or make one feel ashamed.

“The soul comes here fully grown and matured, free from all vices—of avarice, sensual feelings, hate, spite, jealousy, and the like—and we live in the closest platonic friendship, therefore we have nothing to conceal.”

“I fear we cannot hope to reach that state,” he replied.

Then, changing the subject, Norris asked, “Would you mind telling us how it is that the clothing of the people has altered in colour? When we saw it at first it was pure white.”

“To you it is merely a question of light,” was the answer; “in your world colour is entirely dependent on light, and when we were outside our clothing threw back to your eyes certain rays, whose united effect produced the sensation of white, but here, in this apparently golden light, the effect produced on your eye by the same white is yellow; but to us colour reflects the mind, though

it may appear to you as being altered by light."

"Do you make colour one of your chief studies here?" asked Esdaile.

"Yes, colour and electricity chiefly, but we study all the arts and sciences."

"Of what use is it," said Belt, "if, when you pass away, some others come and follow on these studies, while you go to more advanced ones elsewhere, and eventually to paradise? Who or what benefits from these studies, and this learning and research, if we must finally remain where all is rest and tranquillity, or in other words, perpetual inaction? If this is what happens, I should prefer to be out of it."

"We are quite content to leave it, but we feel that our faculties of thought and desire to acquire knowledge were not given us to remain idle at the last, when eternity is before us; and when paradise is reached, there will then be the use for the practical application of the countless years of study and preparation of the soul for union with its Maker. No work can be objectless, to end in mere futility, or it would be against all the laws of nature. We are therefore all satisfied, after our experience of the past, to leave the future in our Master's

hands, knowing that He actually *needs* the work of every one of us, and has created us for this specific purpose, to be with Him and help Him in His vast designs. What these are cannot be unfolded until we are so perfect and pure that we can be made equal with the Master, and until that time comes our minds cannot understand."

They then invited us to see the city, which had previously been invisible to us, so we passed outside, and again was the colour of the people's garments changed.

CHAPTER XIX

A SYMPHONY IN COLOUR

“Every hour a picture that was never seen before, and shall never be seen again.”—EMERSON.

STRUCK by this remarkable variation of colour, we asked our guide the reason why some had changed and others not.

“You see,” she replied, “that we communicate with each other by the language of thought, and, by reason of our naturally close assimilation with colour, the colour waves being disturbed by our changing thoughts, change also and vary according to the particular colour waves set in motion by our thoughts.”

“I do not grasp this,” said Norris, somewhat mystified. “Would you kindly explain the matter further, as I personally know little of the theory of colour?”

“It is a very wide subject, and difficult for you to comprehend as it affects us,” she replied. “Colour is a feeling which is present with a definite excitement of the optic nerve, and communicated by that to the brain; what is considered true colour is produced by certain waves of ether, carrying light which, passing

through the eye, falls upon the retina and so is sent on to the brain through the optic nerve. To us, colour is part of our very existence, and so fine are our perceptions, that we actually feel in our persons the various light-bearing ether waves which pass through us, and as our thoughts change, they disturb these ether waves and, altering the relative balance, or the proportion of one to the other, readjust the light and colour around us. To so great an extent is this felt, that when we were all of one mind—that is, all thinking of the same thing—the alteration was sufficiently strong to make it appear to you as though the house we have just left was lit with a golden light—which it really was, but it came about by our united thoughts of the glory and goodness of God, and hence the light changed to a radiating glory from every one of us. Even now, as you will see by glancing around, some are still thinking of that glory, and so their garments remain dazzling in their brilliancy, like cloth of gold set with jewels, but in reality it is but the reflection of their thoughts of the brightness, majesty, and glory of Heaven.

“Others you see whose garments have changed colour along with their thoughts—as

an actual fact, all are white. See, there are two," indicating two in front, "whose thoughts are like their garments, pure white; they are thinking of a pure after-life when they will be happy and blameless, working for ever in the pure, undefiled presence of the Creator."

Her manner and language were so impressive that we all felt as if in a divine presence, and Esdaile asked, below his breath, "What does that beautiful spring green denote?" pointing to a figure near to us.

"She is thinking of the beauty of God's creation; how at His mere approach the glad earth opens itself to meet Him in welcome rapture; the flowers bloom, the birds sing, and even the humble grass becomes a purer, brighter green—all join together in praise and clothe themselves in a sweet, fresh garment in which to bid Him welcome. Look! the green garment is already turning into grey; now more pink, and now a beautiful rich purple; so her thoughts change from the springing up of all things to the greyness of temptation, then to the rose-leaves strewn across the path, that the King may tread on a soft and fragrant bed, till at last He comes amongst us in all His majesty."

"What does that mean?" Esdaile asked,

excitedly—"that glorious brightness slowly changing as we watch."

"He is thinking of the human life, which begins in brightness and innocent purity ; now the colour fades and becomes muddy-looking as the life falls under temptation ; now it brightens as temptation is overcome and sins are forgiven, and all becomes glorious and golden, for the glad summer of life is in his thoughts. Now it pales, and the winter of old age comes on ; but the cold, harsh greyness turns into the calm and restful grey which is delightful to look and dwell upon, as is the calm and quiet of honoured old age. So it is with all you see around ; colour is the index of thought, and so we read each other and are read, and in this way we become a mutual help and comfort."

So we progressed along the streets of this erstwhile invisible city, where everything, including buildings, was pure white. This brilliancy was not in any way painful to our sight, as the constant alteration in colour of light and costume caused by the changing thoughts of the inhabitants produced a wealth of rich and beautiful hues at every turn—always beautiful, sweet, and pure, the changes blending so harmoniously as to make an exquisite

picture wherever one turned. It was like a fairy vision, and to see the substantial streets and buildings and living people, where before we had seen only flowers, trees, and open country, but heightened the impression.

It is impossible in words to describe the wonderful city, for the most glowing description and compilation of adjectives and metaphors are but tame, and altogether inadequate to the merits of the place. From every stone shone out a glory and radiance which humiliated us by its purity, seen in such contrast with our own ignorance and sin, for these people worked, designed, and built, and not only knew the sciences, but felt and understood the very why and wherefore and "essence" of them, and could get at the root of things; whereas our knowledge was all summed up as a smattering of a few of the laws and lines governing the forces of nature. Truly this was a city of the mind, in which the soul and its Maker communed as between friends; a city eternal in the heavens, which recalled to our minds that "eye hath not seen nor ear heard" the wonders that God has in store for them that love Him, for whom are prepared mansions of surpassing beauty. Could these be some of the mansions?

CHAPTER XX

THE POWER OF NATURE

“Draw on with everlasting influence
Towards eternity the attemper'd mind.

SOUTHEY.

THE knowledge of these people was so profound, and they knew so well how to utilize the secrets of nature, that their machinery, though highly efficient, was of very simple construction, though to us very strange. It was mostly electric and magnetic, something after the style of that of the City of Earth, but of far higher grade; for instance, did they desire metal melted and hot, they gathered the electro-magnetic waves of ether together in certain strength, and so placed the metal between them that the waves would pass through its entire length. Instantly the metal would then act as a switch, connecting the negative with the positive waves, and itself be instantly fused so as to run in a liquid state like water, but of any heat desired, from red to dazzling white: did they want it liquid, without heat, then the quality of current was varied,

and the metal became liquid like mercury, deatomized with visible atoms, and could be bottled if necessary: did they need it in invisible atoms, the metal was brought into contact with a still different quality of ether waves, when it was again differently deatomized, and became vapour, as invisible as ether itself.

Ore was not obtained by quarrying, but by drawing it out of the ground with magnets, which smelted it in the getting, and all lifting and carrying were done by magnets of various forms. In fact, in every instance the forces of nature were brought to bear on nature, and all the people needed to do was to mentally control them.

We were rather curious about some peculiar pointed rods like large crowbars but as light as wands. They explained that these were for cutting metals and very hard substances, and were made of a very hard self-hardening, yet strange to say, flexible steel, and were polarized in such a manner that the magnetic waves would pass through their entire length in parallel lines, and then on into the earth, so that when held in the hand and in a certain position, they would be drawn into the material, thus cutting it as much or as little as desired. If the object was

required to be severed, the rod or rods would simply be allowed to be pulled right through, the earth having enough attractive power on the rods to draw them to the ground through anything; indeed, so great was this force that unless checked, the rods would enter the ground and disappear altogether. When the rod had cut sufficiently deep, its action was arrested by inclining it from the vertical, and the magnetic waves would then cross the line of cut and the earth obliquely, when the rod could be removed, as it would only cut when in a vertical position. Much of the carving and statuary was done with these simple but effective instruments. Belt looked at them longingly, and was just about to ask for one when I trod on his foot and shook my head to prevent him, but as he was rather dense at taking a hint he did not see it, but instead asked me what I meant, which drew attention to me and made me feel small, so I asked where he had got that staring mark on his back, which made him uncomfortable for many an hour. It served him right, but this sweet revenge for giving me away so plainly did not deter him from asking for one of the rods, although, by their understanding thought, they must have known we all wanted one, but

only Belt had sufficient nerve to ask, probably on his usual principle that they could but say no! They were generous enough to give us one each, with careful instructions as to their use, saying they were powerfully magnetic and were never to be held vertically except when in use. We were of course delighted with our new possessions, which we valued very highly.

Coming to a large standard with a hood over it, and a peculiar boss like a breast-plate, or circular shield, on one side, we asked its use, and were told that it was a powerful magnet which was drawing ore and metals out of the earth from an immense distance away. We were cautioned not to pass before the boss, and then invited to see the town and district from the roof, the ascent to which was close at hand. We readily assented, and so as to run no risks with the rods, the guide advised us to rear them up. Belt collected them from us, and was going to rear them against the wall behind the standard, when the guide told him they would there be in electrical contact with something, and, directing where they were to be placed, turned to continue some explanation to Norris. Belt, finding a little difficulty in rearing the rods against the wall, laid them on the ground,

thinking they would be just as safe, and pushed them straight with his foot. What agency he started is a mystery to us, but while his foot was still on them, there was a frightful blaze of blinding light like lightning, and a terrific crash and roar—and in the twinkling of an eye the four of us were flung aside with irresistible force.

CHAPTER XXI

A FIRM RESOLVE

“I stand . . . unshaken as a rock
That bears the force of storms, yet still remains
Firm on the base.”

BUSHE.

WE came round after a while, feeling very ill and terribly stiff. None of us had escaped injury from bruises and burns, and Belt, being nearest the rods, had received the full force of the shock, one arm being broken in two places. Our guides were uninjured (these people not being subject to accidents), and they were unremitting in their care of us, but would not say what had happened, except that we had disobeyed their directions. The only conclusion we could come to was that the enormous power of attraction generated by the machinery for obtaining ore, and the equally powerful magnetic rods, had formed, as it were, the two terminals of a gigantic current of electricity. It is a well-known fact that if a positive and negative body are placed apart, no current can pass between, but should one or more conduct-

ing bodies be placed between them in the electric field, a connection will be made and a spark will fly across, as in the everyday electric arc light, which is inactive so long as the carbons are too far apart for the spark to jump, but if brought close together and then withdrawn slightly, the spark will leap from one carbon to the other, and we get the arc light. The electricity here being drawn from the air and earth on the waves of ether only, slightly different conditions would follow, but there is little doubt that we had ourselves, on the moving of the rods, been brought into the electric field, and so become electrified by induction.

Naturally we were extremely sorry, but we were the only sufferers, and it was some days before we recovered.

We now talked of resuming our journey towards the south, and began to make inquiries of our friends as to the best method of reaching the Pole. We were entreated to abandon the project, and one asked us why we could not return with the knowledge we had already gained, when Norris, in his decisive matter-of-fact way, summed the whole matter up in a manner which left no doubt as to our intentions, saying—

“We in the outer world have long wished to penetrate these regions, to find a solution to the various problems hidden behind the barrier of ice which we have passed, but every expedition has hitherto failed to even penetrate the barrier. We have been sent here under conditions which no other explorers have ever been fortunate enough to possess, and we have all vowed that we would discover, if not actually stand upon, the exact spot called the South Pole, or die in the attempt.”

“What do you wish to find out more than you know?” they inquired.

“Chiefly the magnetic influences which have occupied the minds and thoughts of the whole world, as yet to no purpose; then the other secrets which are hidden under and beyond the snow and ice of the barrier, such as the geological, biological, physical, and innumerable other problems.”

“Do not seek that which you should not know,” spoke our guide. “Around the forbidden country has been placed an impenetrable barrier of ice, and as a further safeguard, the whole region is storm-riven and inhospitable. Through this you have miraculously passed in safety; but go no farther, for whoso pene-

trates the prohibited mysteries of nature, meets his doom," and she regarded us pleadingly. But when once Norris's mind is made up, nothing can move him ; he spoke as he sometimes does, in a way which shuts people up like an oyster, and which, without being offensive, gives one the impression that what he says finishes the matter completely, so far as he is concerned, so now he broke in with—

" We *must* go forward, to success or doom, for we either get to the Pole or we die, and I am sure that is the determination of us all."

" Yes," said Belt ; " already we have learned much of the magnetic influences of the south from Antistes, the temple of Ulka, and yourselves—in fact, our being here is proof of it. We are sincerely grateful for all your cautions, but go we must."

" We are also anxious," said I, " to get at the secret of electricity, to find out the real essence of the magnetic and electric conditions."

" That is hidden away in the far south," our guide replied, " in the city I mentioned, but none can pass there. We do not know what the secret is, nor can we explain the way in which we feel it ; but this we know—that emanating from there is a mysterious life-giving

energy radiating into space, which permeates all life, air, earth, and all things on and in this world, but the secret and essence of it belong to the Infinite. Who are we to demand or attempt to know what we are not as yet capable of comprehending? No! Go back, and we will conduct you through the barrier; but go forward, and you go alone to your death." With such arguments as these they endeavoured to persuade us to abandon our project, but to no purpose, and, seeing that it did but tend to make us even more determined to proceed, they gave it up, and we all slept hard and long, intending to start in about twelve hours.

CHAPTER XXII

INTO THE DREAD UNKNOWN

“The bright sun was extinguished
... and the ... earth
Swung blind and blackening in the moonless air.”
BYRON.

WHEN we awoke we were lying on the flowery grass beside a little burn which was running merrily along ; around us lay Nature in all her spring beauty—grass a luscious green, flowers of all kinds, trees of noble form and exquisite colour—and high overhead rose the joyous songs of birds. Our late experience was like a dream, but everything was, we knew, actual fact ; beside each of us was the metal rod which had been given, and if we wanted more proof, our burns not yet healed and Belt's broken arm all proved too conclusively the reality of the scenes we had just passed through, but where, were the people ? Close beside us we felt sure, but again invisible.

We started off on our long tramp south, having a definite sensation of their close proximity ; but after walking three hours, covering about

ten miles, we felt that we were now quite alone. In a few hours more the appearance of the country began to change; grass and flowers gradually gave place to moorland, moss, and gorse, then even this grew more sparsely, and a few stunted trees ended in a large bog through which no path could be found. A wide detour had to be made to skirt this, and we entered a dismal wood by means of a natural lane or path between some rocks. The bog was fed only or in part from this point, where the water came tumbling down a rocky bed into a natural gully, or open culvert, and from thence amongst the ooze and rushes of the bog. We must, of necessity, climb up this stream, as the far side was bounded by the bog, and above that by an overhanging cliff too high to climb, and this cliff extended up the stream as far as the eye could reach, in some places overhanging almost vertically above the opposite bank. The vegetation now became almost tropically luxuriant. On both sides of the stream long reeds and ferns grew chin high, and trees whose flowing tresses the water swept and kissed as it rushed past. Suddenly the cliff ended, and we found a bog on either bank, so we were obliged to take the centre of the stream, which fortunately was filled with boulders of great size, all covered

with a minute, vivid green moss, exceedingly slippery and difficult to climb.

The trees soon assumed a different aspect, becoming more and more sombre. At a point where the stream narrowed we came to a forest of pine trees, through which the water tossed and tumbled with a sullen roar. These trees, tall, stately, and menacing, sent up their naked trunks to a great height, with all the foliage at the top, making all below so dense and dark that the vision failed to penetrate their weird and terrible blackness. For some distance we continued our wearying climb, still in the stream, for hard as that was we yet found it the easiest method of ascent. Then the trees grew thicker and the gloom deepened, and but for our forehead lights we should have been in complete darkness; for hours we wandered on in the unholy blackness, calling aloud to each other continuously in order to keep in touch and locate ourselves, as we were separated and hidden by the twisting stream, our voices being the only sound which broke the oppressive, deadly silence, except an occasional splash as one or other fell back into the water by sliding off the wet and slippery moss, or by making false jumps across pools. The utmost caution was necessary, and we had to feel and tap for

every step, till we were completely fagged. All around us still rose the limbless trunks of the pines to an immense height, our lights shining on them strangely, casting weird, unearthly shadows, as from some ghastly human forms, fantastic and ghostly. Just as we were beginning to wonder whether it would not be wiser to return and risk finding a path across the bog, the forest became thinner, and now the light coming from above fell on the pines ahead with a curious and wonderful effect, as though a veil of some fine, silk muslin was stretched across our path, through which the trees could be hazily seen. We stood watching this with keen interest for a while, and then continued our weary climb up and up to a great altitude, till finally, emerging from the trees, we found ourselves at the top of a high mountain some five to six thousand feet above the plain. The stream had led us almost due north, and looking back over the forest we had passed (that is, towards the south), we saw the extensive bog, and beyond that beautiful pasture-land. Towards the north lay a similar prospect, but running diagonally from the east to the southwest was a range of hills, cutting off all sight of the extreme south.

CHAPTER XXIII

IN PERILOUS PATHS

“All desp’rate hazards courage do create.”

DRYDEN.

APART from the way we had come, there was only one other means of descent, by a dangerous sheep-track and jutting ledges on the precipitous face of the cliff; the descent of this would be doubly dangerous by reason of Belt's broken arm, which was in splints and useless. However, we should have to descend in order to get south, so after drying our things we negotiated this, and after much difficulty safely reached the plain. After following our line of detour at the far side of the bog, we again headed due south, and for several hours journeyed over the springy turf, by which time we were again greatly in need of rest. For some reason which we could not understand, unless it was that we were on the same ether waves as those in the temple, we felt that walking southwards became very fatiguing. As we got farther and farther south it became still more so, as though we were in a kind of

continuous nightmare and wished to go forward, but our feet were being held down, and our bodies seemed to be pushing against a solid but elastic substance ; yet when we turned round to go north, we were almost carried along without exertion, proving the presence of some strong magnetic repulsion, emanating from the south pole. This was in a measure comforting to us, for our journey back would be much simplified.

We slept on the heather on our furs, but we were awakened by the cold, which was now intense. This occasioned us no small surprise, as it had not been necessary to wear our furs since finding ourselves within the ice barrier, but we now got into them and lay down again. Even now, with the heat from the "Tynstele," we were none too warm, for the wind smote us pitilessly with its icy blast ; then it began to rain—cold, piercing rain which came down so heavily that in half-an-hour the plain was covered with water four inches deep. To sleep in this was impossible, so we journeyed on, testing every step with our alpenstocks, the way becoming heavier and more broken every hour, and, to make matters worse, a mist came with the rain and blotted out everything. We had been wading for at least ten or twelve hours,

and the water had now risen up to our knees. Nowhere could be seen a resting-place ; nothing but a waste of water and driving rain losing themselves in the mist around. Weary and uncomfortable, we were compelled to splash along hour after hour, till we were completely exhausted, and all felt much relieved when we saw a great rock looming out of the mist ahead, and in a few minutes we found ourselves at the foot of the first of a range of hills, and, seeing an opening some little distance up, we climbed into it, and immediately we reached it, lay down and fell asleep, thoroughly done up. We were awakened by a peal of thunder, so close as to seem inside our little cave. The mist had cleared and the rain had ceased, but the lightning and thunder followed each other in such rapid succession as to be altogether bewildering, and below us the reek from the plain, now like a sea, was full of fire. Twice the lightning struck the very hill in which we were sheltering ; the first time high above our heads, with a terrible blow which we could distinctly feel, instantly followed by a deafening crash that made the whole hill tremble, and there fell a great mass of rock weighing hundreds of tons, with the glare of the lightning still on it,

shining like a meteor. Down it came, almost on our heads, catching the ground about ten yards in front of us and then bounding off, as though shot from a catapult, straight on to the plain, where there followed a mighty splash, and another hill was added to the survey. The lightning then ran along the water, was caught up into the reek above, thrown back on the water, again caught up, and in less than a second the whole sea of reek and water was one mass of ricochetting fire, awful to think of, still more awful to behold. We crouched in the farthest recess of the cave, and well for us it was partly open to the sky or it would have proved our tomb, for again was the mountain struck and tons of earth and rock rolled down it, completely filling in the mouth of our place of refuge. For over three hours we were the centre of the most terrific storm we had ever experienced. Mountain after mountain were struck by the lightning, and in obedience to its blasting flash rocks and debris were hurtled in all directions; and all this clamour, added to the terrifying thunder, completely unnerved us. However, everything comes to an end at some time, and so at last the storm spent itself and passed away, returning

now and again with a vivid flash and a deafening roar, like a fighting giant who suddenly sees a point where he can still increase the damage he has already done, and then, tired out, he rests from his labour of destruction—so the storm died out.

We had then to get out of our refuge, and the only way was to climb through a crevice in the front part of the roof; so we tied ourselves together and hoisted Esdaile on our shoulders, when he gripped the top and hauled himself out and got a firm footing, and we were all very soon outside again. We expected to see the geography of the district very much altered, but beyond a few clean patches of bare rock, and large boulders here and there, nothing seemed much changed, the large rock which had fallen being almost lost in the immensity of the rugged plain; even the lightning, powerful as it is, has little effect on the everlasting hills.

We resumed our journey south, still feeling the force of the magnetic influence against us so strongly that we were obliged to rest every few hours. Fortunately, the way itself was not difficult, as most of the mountains were easy to climb, and only occasionally did we meet

with precipices and large masses which had to be carefully negotiated or avoided; indeed, many of the descents were on grassy, shady slopes, where we could roll or slide down.

The third day on these hills we had ascended one of the highest ridges that had to be crossed, and on reaching the top found a large plateau with an opening in the centre. This plateau was covered with beautiful, mossy grass, and inclined gently towards the opening, on reaching which we were surprised to find it like a gigantic well, or quarry. At some time it might possibly have been a crater, but it appeared to have been quarried out. This quarry was about two miles across one way, and three miles the other, the sides going sheer down, cut in slabs and ledges as is usual in quarries. About a thousand feet below and covering the whole bottom was black and silent water, the surface of which was not stirred by so much as a ripple, being too low for the wind even to touch. Whilst we looked at it Esdaile said—

“Let us get away from here a little and look about, or we may be jumping in to see how it feels; that still, black water draws one like a spell.”

We accordingly devoted our attention to the formation of the plateau, which Norris said had been pasture-land, and I found a few herbs which had originally been planted by man, but were now partly wild.

Norris said, "Let us all lie down flat and hold each other by the ankles, and look over the edge of the quarry in turn; we then might make something out with the help of the glass."

This seemed a very wise suggestion, so we carried it out. It was impossible to surmise how the water had got in the quarry, as the surface would be at least twelve thousand feet above sea level, the mountain being about thirteen thousand feet high. Norris was sure the quarry had been cut out by hand, but there seemed no reason for it, as who would think of climbing that height for stone, which could have been easily obtained lower down on the ground level? As regards the water, if the people had tapped some spring and so filled the quarry, the water must have come a tremendous distance, as it could not rise higher than its source, and was at a much higher level than the hills around. Even at this height there was no appearance of snow or ice, nor was the air unduly rarefied.

We walked round the quarry or well on the

broad plateau, which was, roughly, some ten or twelve miles square, in search of a descent at the south side, and when about half-way across, Norris drew our attention to some grass ahead, which, for a width of about fourteen feet and the full length from the edge of the pit to the outer precipice of the mountain, was a browner and greyer green.

“There is little earth under there,” he said; “I’ll stake anything there is stone in less than a foot beneath.”

When we reached the spot we turned over some of the sods, and there, eight inches below the surface, was a line of hard stones or sets. Baring this for some distance, we found it to be an actual roadway leading direct from the edge of the pit to the edge of the cliff. On the cliff side the precipice extended some five or six thousand feet sheer down, terminating in a wooded, unbroken slope to the base of the mountain.

With our rods we took up a few stones, to find below them a thick mass of concreted ironstone, in which bars of iron had been inserted as girders, and still lower was a hollow. The roadway was, without doubt, intended to sustain very heavy loads, but the under cavity

had to be explained; so with our rods we cut out a great slab, which broke by its own weight before the last portion was cut through and fell into the yawning gulf beneath. Trying the same thing near the edge of the quarry, we found a flight of well-worn steps going down into the darkness, but on Norris descending a few yards, he had to be hauled back by the rope, the foul air having proved too much for him. All of us set to work with our marvellous rods, and very soon a hole of great dimensions was made, when we were surprised to feel a slight rush of air, as from an opening below.

Not wishing to take any unnecessary risks, we encamped on this plateau, and the next day the foul air had sufficiently cleared for us to go down the steps, which led us through a broken wall to a large and apparently deserted laboratory, similar to that in the temple of Ulka, but fitted up for the study of hydrology only, everything being in excellent condition. Here we spent considerable time, and obtained much valuable information respecting the science of water, its phenomena, properties, and laws. We found that the quarry was really a well, and the water gave the force for a gigantic

hydrostatic press for some mysterious machinery which we did not understand, and which we dared not interfere with, remembering our adventures on the circular slab in the temple. We understood very little of the apparatus, and not knowing enough to make more than a slight use of them, we gave it up and sought to find an outlet that would bring us to the base of the mountain, but without avail. We had therefore no alternative but to remount the steps and return to the plateau.

We thought it strange such a place should be deserted like the temple, and regretted not asking our spirit friends of the colour city why the latter was abandoned, but no doubt the people in the next city, if we came to one, would answer both questions.

We prepared to make the descent on the south side of the mountain, but before leaving we named it the "Champion," following the example of Sir James Ross in naming Erebus and Terror. As near as we could tell without instruments, the geographical situation of Mount Champion would be about one hundred miles from the Pole on the 168th meridian of west longitude.

The descent was an exceedingly dangerous

and difficult business, till we came to the last two hundred yards, which was a slide down a slope of soft slate shale in which we were half buried. We then crossed what had at one time been the bed of a great river, but which was now filled only with large boulders worn round and smooth like gigantic eggs, plain evidence of the force of the former torrent. Then up a long grassy slope, bounded by trees at the foot, and still up towards a range of crags forming a buttress which towered a terrible height, beetled and knobbed, defying all efforts to climb. This buttress stretched away on either hand for miles, as far as the eye could reach, and was of peculiar formation. From the fringe of trees beyond the river bed, the grassy slope ran up steeply for a distance of about three thousand feet ; then there was a vertical wall about twelve or fourteen feet high. On the top of this was a flat part about as broad as a cartway, covered with grass and herbage. This formed the buttress to another wall which was about one hundred feet high and fairly easy to climb, which in turn formed the buttress to the crags proper ; these went straight upwards from the upper wall for a distance of twelve feet, or perhaps a little less, and then

projected outwards with many cracks and crevices, over the lower wall—so that before the upper part could even be attempted, the climber would have to cling to the overhanging portion like a fly on a ceiling, and crawl there for at least fifty feet, with a chance of falling on his back some three thousand feet below. Above this the rocks went upwards in big, warty excrescences for four hundred or four hundred and fifty feet, and ended at the summit in a fairly level edge, the whole appearing from below like a gigantic titanic wall. By dint of long and laborious perseverance, climbing with hands and feet in the crevices, we reached the projecting rock.

Norris was a member of the Alpine Club, and the most expert mountaineer amongst us ; we had witnessed his skill when he climbed up our balloon, and now he insisted on climbing this great projecting mass of rock. Our four ropes were joined together, with one end tied round his body and the other round our alpenstocks, which we had partly embedded in the rock ; we gazed very anxiously and, with many prayers, saw our dear comrade creep slowly outward hanging like a sloth. Now he was beyond the lower buttress and over a fearful space, yet inch by inch he crept on, the rope

being paid out as required: if he should fall, the jerk at his waist would probably break his back, even if he were not dashed to pieces by banging against the rocks below, and as we watched, with our hearts in our mouths, we deeply regretted allowing him to attempt such a risky and apparently impossible feat, but this was the only place where the cliff could possibly be scaled. His progress became slower and slower as he took all the weight of the sagging rope, and now he stopped altogether. Watching intently, we saw that he had come to a part where the next crevice and knob, or spur of rock, were beyond his reach, and so he stuck, clinging like a caterpillar with his whole body to the rough surface of the rock, unable to go forward and equally unable to turn back. In terrible suspense we gazed and prepared for the fall and jerk to the rope which we felt must follow. Very soon he seemed to be wavering and was about to drop, as we thought, when, the instant his body let go its hold, we saw that he had actually sprung for the projecting knob of rock! By a miracle he caught it, and hung by his hands with still twenty feet to travel, but he never lost his nerve; with his whole weight resting on his fingers, inch by

inch he performed that herculean task, and we saw him turn the bend where the remainder of the climbing would be easy, and in a few minutes he gave a loud whoop! to announce his safety.

He tied the cord from his waist round a big, warty knob of rock and shouted for the first to come. As had been previously arranged, I tied our end round my waist and a long piece of string to the end of the rope to pull it back again, and closing my eyes, sprang off the ledge. There was a sickening jerk where my dinner was, which upset my digestion for some days, and I commenced to spin round, swinging like a pendulum. I gave a glance downwards, and the awful space below made my head reel a little, but looking up, I saw Norris steadying the rope with his hands to prevent it chafing against the rock, and the next moment I was underneath the crag, and could have shaken hands with Esdaile and Belt. Then back I went again with the swing far beyond Norris into space; after two or three wide sweeps, I got my head and began to climb up hand over hand, the swinging and spinning becoming less and less as I got higher till I felt the wall of rock. A little higher and

my feet touched it, and twisting an arm and leg round the rope to prevent slipping, I clung to the rock face with hands and feet for a few minutes till my head cleared, and in five more minutes I was on the grass at the top, flat on my back. We undid the rope end and threw it clear, when it was pulled back by the string. Belt came next, Norris and I hauling him up, for he could not climb with one arm only. Then Esdaile hauled the rope back and tied it round his waist, the string with it, and soon we were all safe and sound at the top of the ridge which had shut out our view of the extreme south.

Our rope had been seriously chafed by the rock, but it was still sound for a good deal of work.

We gave no thought to the return journey, but gaily proceeded on the flat top which rose slightly towards the south, so that we could see nothing but sky till we reached the brow of the hill, when there suddenly burst upon our sight a scene which sent us nearly frantic with delight.

CHAPTER XXIV

A HAPPY LAND

“Were my whole life to come one heap of troubles,
The pleasures of this moment would suffice,
And sweeten all my griefs with its remembrance.”

LEE.

ENRAPTURED we gazed on the scene before us! Far below, as far as the eye could see, stretched an immense plain across which shone a wonderful light; this plain was fairly level, dotted here and there with trees, shrubs, and flowers. With the glasses could be discerned several cities or towns, but the central object which attracted our instant attention was a wonderful light immediately opposite to us, on the horizon.

In appearance it was like the sun for splendour, too dazzling for examination, but it seemed to be a large flat body like a fallen, flattened sun, lying on the ground and lighting up the whole country in strong, straight rays, as if it were the glowing hub of a gigantic wheel placed flat on the ground, sending innumerable spokes of light-rays to its enormous

tyre, formed by the range of hills on which we stood, which stretched away to right and left in a vast circle. So white and blinding was this nucleus of light that it appeared to be molten, white hot, and its rays so penetrating that the whole plain was lit as by a searchlight, but with no strong shadows; and even as we watched the colour changed. Miles below us some rivers flowed along like ribbons of burnished gold, and the country around lay bathed in a golden light, which slowly became yellow, or deepened into violet, then blue, then again violet, red, orange, yellow, delicate green, then deeper greens paling again into bluer greens, till pure blue was seen, and this again paling or changing to violets, reds, and so on, in an ever-altering mass of ravishing colour which throbbed and vibrated like a living atmosphere; and anon some tints would pass over those already present, giving delicate tertiary colours like broken greens, russets, brown, and pinkish greys, as though one set of colours were racing another set, and sometimes winning—one tint becoming blended with the next before the previous tint had time to alter.

Never had we seen such a sight before! It

is impossible to describe the glory of the scene ; the cities and the whole landscape shining and shimmering under this fairy-like effect thrilled us with excitement beyond all words, and will never be effaced from our memories.

“ Surely that is the Pole ! ” said Belt ; “ Antistes spoke of a column or spring of fire there . ”

“ The south pole of the compass is dead for it , ” said Esdaile . “ I feel as excited as a school-boy . Let us go down . ”

We were all in much the same state, and eagerly searched for a way down, soon finding one. The descent, which we had thought would be dangerous, if not impossible, proved comparatively easy, for it was amongst great rocks which we could walk round or jump from, and in the course of four hours we were at the end of the more difficult portion, the remainder being but a gentle slope to the plain. We took things easier now, walking down, engaged in surmises, when a strange thing happened. All the varied colours had gone, the plain now being lit with a steady golden-blue light, something between the colour of sun and moonlight, but with the glare and heat of sunshine.

We stood some minutes expecting the colours to return, but the light was steady as the sun.

“It is very strange how that light has altered,” exclaimed Esdaile; “can the colours be an optical illusion? Let us go back a little and see.”

Accordingly we retraced our steps a little, looking around frequently, and at last came to a point where the colour returned. Below this point it was lost; above it the full variety appeared. No doubt this was caused by the light striking a stratum of atmosphere, and the moisture in it, by refraction, produced the prismatic effect of the rainbow, which was reflected back to us at the same angle as the direction of the light-beams. In a similar manner the light of the sun, striking each rain-drop, penetrates it, and is refracted to a point at the opposite side, where it is reflected back at the opposite angle, giving us a series of prisms, or the rainbow, which is but the colour of ordinary daylight split up into its component colour waves.

The shimmering changes were not so easy to account for, as the vibrations of the ether and some slight moisture in the atmosphere would not explain it satisfactorily.

Again we descended and soon reached the plain, when its beauties could be seen to perfection—foliage, flowers, and fruits were in tropical luxuriance; animals there were in plenty, but they were so tame, and looked at us so innocently and fearlessly, that we did not care to shoot them with our revolvers, although we were longing for the taste of meat. Close beside us passed a panther, nibbling the grass here and there in perfect indifference to our presence, and soon we saw other animals, not previously known to eat other than flesh they had themselves killed, eating grass and nipping off the tender shoots of trees, as we find customary with our domestic cow.

All this considerably reassured us, as we had naturally at first been very much on the alert at finding ourselves amongst what we had hitherto known as savage animals, but as we saw that they were here perfectly harmless, we went amongst them fearlessly.

“This is something like,” exclaimed Belt; “it is like a Bible story, saying that the lion shall eat straw like the ox.”

“Perhaps we have got to the Garden of Eden,” said Norris, laughingly; “after this I should not be surprised if we came across Adam!”

“Is that fire, or fallen sun, still due south?” I asked.

Norris looked at his compass and replied, “The needle is dead for it. Shall we go there, or visit one of those cities we saw from the hill?”

We all wanted to go south first and solve the mysteries there, if we could, particularly the magnetic problem, the solution to which had never yet been more than guessed at. We therefore set off, taking easy stages, almost blinded in the glare which beat in our eyes painfully, and in time we came to one of the rivers, the cool shade afforded by the trees and undergrowth being very grateful to us. Here we rested our weary limbs, and were just preparing to sleep, when we heard the trumpeting of an elephant close at hand. Jumping up, we were about to run off when his lordship, a great grey beast, came lurching up to us with swaying trunk. We were instantly on the defensive, when we saw the new-comer was friendly, and in a moment his great trunk swung towards us. Norris, with great presence of mind, caught it in his hand and gently stroked it. The animal seemed quite pleased, and in a few minutes peaceably passed on. As we were evidently just in the track of animals coming to drink at

the river, we found shelter amongst some high grass, and were soon all locked in a fast and dreamless sleep.

We awoke to find the light from this ground-sun still creeping between the trees, forming flickering splashes of golden yellow all around, whilst here and there before us the warm-grey trunks of some firs became ruby red as though bleeding where the light caught them, and all around were golden arrows of light darting hither and thither, as the moving leaves and rushes brought new and ever-changing points of entrance for them. We lay enjoying it all, rested and content, as one enjoys such scenes in a well-earned holiday ; so we remained, still lying down, silently drinking in the quiet beauty and restfulness of the peaceful scene, where all was good only, no evil of any kind to fear, only nature as God made it and meant it to be ; as our own part of the world will be, no doubt, when man has learned all his lessons and become free from sin, when there shall be nothing that can hurt or destroy under heaven.

Something of the calmness of the scene sank into our hearts and filled us with an ineffable peace and thoughts too sacred even for utterance, and it was in this spirit of quiet con-

templation we resumed our journey and forded the river, which was but shallow. On and on we went until, feeling the heat excessive, we put down our knapsacks of furs and our rods, in order to rest a while.

When we attempted to take up the rods again for a fresh start, we were surprised to find them so magnetized that at a touch sparks flew from them, and we received powerful shocks ; in fact, these were so severe as to sear our skin. The rods were magnetized to the ground with such force that our united efforts could not lift one of them, so we expected they would have to be left behind.

In order to solve the mystery, we discussed the question of the magnetic influences of the Pole. The small charts we had with us, showing the lines of magnetic dip, declination, and of horizontal force, were of course only useful for the ground and seas over which the force had been actually tested, and many of these could not be traced through their entire course. In addition to this, the magnetic field of the earth had necessarily only been studied in its relation to the exterior surface. The utmost extent of present knowledge was that this force passes along certain variously-curved paths

from regions in the southern hemisphere to regions in the northern, thus the former (the southern hemisphere) is the seat of northern, or positive magnetism, the "magnetic" north pole (not the geographical north pole) being analogous to the south pole of a magnet.

The method by which these lines of force are tested is to suspend a perfectly free magnet very accurately from the centre of its mass, allowing it free play ; and the direction in which the magnet points is the direction in which the line of magnetic force travels. According to the geographical position, so will the needle change, deflecting, dipping, etc. ; and these alterations are, of course, noted on the maps, so that the difference between the magnetic and geographical points of the compass can be allowed for and corrected.

Antistes had so altered our compass that it would be true under all conditions, but with another smaller one which hung on Esdaile's watch-guard, there appeared to be a decided deflection to the north, just over the place where our rods had been put, and running parallel with them, but there was no telling if this compass was perfectly true, though by testing it in various places we found it fairly

correct. By sliding the rods round horizontally, across the lines of current, they were easily detached, after which we began to look on them with even more respect than before ; that they were anything but toys we were destined quickly to find out.

After proceeding a few yards we must have entered an electric zone, for the rods suddenly became dangerous, emitting sparks and flashes of light ; they stood almost on end and danced about alone and unsupported, just as a feather will under similar influence. We retired to some distance—a dozen yards or so—and hot as it was, put on our furs for greater security. Almost immediately the rods became the focus of a violent electric disturbance ; dancing apart, they stood up, gyrating in all manner of positions, we wondering if they would disappear if they became vertical, but this position they did not assume. Then each rod formed a new centre ; the electric fluid passed from one to the other in lightning flashes, with pistol-shot explosions, and a perfect fusillade of electric splutters, like explosive fireworks. At last they became separated too far, when they fell to the ground and became ordinary rods again.

“ I fear these curios are going to prove rather

dangerous possessions," said Esdaile, going up to his rod gingerly. "The people did well to caution us about them."

"If this sort of thing goes on they will be the death of us," said Belt. "I propose we leave them where they are and get them again in returning."

"I think with you that we have more than we bargained for," said Norris; "but we are not sure what we shall do, and we may not come back this way, so many things have happened contrary to what we expected. We have carried them so far that I think we may as well take them the remainder of the journey."

We none of us wanted to lose them, and thought we might as well take the risk, so each took his own rod, with no small misgivings as to what it would do next; but they were now harmless enough, and beyond the effort to keep them out of the vertical, they were little trouble to us and no impediment.

CHAPTER XXV

AN ELECTRIC STORM

“. . . Never till now
Did I go through a tempest dropping fire.”
SHAKESPEARE.

ABOUT six hours after the incident related in the last chapter the heat became very great and we loosened our furs; a little later it became stifling, and a thick mist began to rise from the reeking earth and the river, which was now flowing towards us at the left, and this mist was soon transformed into a golden haze by the light.

“How close and stifling it is,” exclaimed Norris; “I fear we are going to have a storm.”

“It seems to me likely to be a magnetic storm,” said Belt. “We had better put these things down and clear off.”

Scarcely had he said this when the rods again began to be covered with a phosphorescent glow, like St. Elmo's fire. Needless to say, we dropped them and beat a very hasty retreat, and at a safe distance lay down full length on the ground watching. Never before had we

seen harmless-looking rods of metal create such a disturbance! First of all, they grew more and more phosphorescent; this paled, giving place to a peculiar cloudiness in the atmosphere around, which quickly darkened, completely blotting out the brilliant light beyond. Then the cloud became transparent, and from its edges shone a glow as from white-hot iron, with the bluish-green light of burning copper at the top, fading into the surrounding grey. This hovered above the rods as a flattish cloud, and then rose, gradually spreading and becoming arched, like a burning copper dome over a white-hot furnace. Higher and broader it spread, crackling and spluttering, lighting all the country around with a ghastly, livid light. Anon would flash streaks of forked lightning from the dome to the rods, and back again with a hissing, smothered roar, in a manner terrible to hear and witness. Still the cloud grew, till it seemed like a gigantic umbrella spread over the rods, ourselves, and the whole of that part of the country. Looking up, we saw the livid green showing through the semi-transparent white, like emeralds in a sea of opals, bobbing in and out as the opalescent canopy rolled and unfolded,

twisted and twined, flashing in iridescent sheets and points of brilliant light ; and from every part of it would some glowing mass explode with a pistol-like report, and let loose a mass of jewels—topaz, diamond, ruby—each of which would explode in turn, letting loose another handful of gems, till it seemed as if the milk-white sky was actually composed of all the jewels found on the earth and hundreds of others unknown, the key-note being always the fire and flash and flittering, changing colour of the opal. The cloud rose and fell, flittered this way and that, and then described a slow revolution, its gyrations making a stupendous kaleidoscope of sparkling gems.

The pen cannot describe this awful yet gloriously-fascinating spectacle, and just when the whole mass of a trillion jewels was gyrating in an intoxicating whirl, it ceased and became troubled like the sea, and then, in the twinkling of an eye, the crest of each jewelled wave became lashed into luminous, prismatic spray, which no sooner formed than it was swept like a streak of lightning high up to the dome and through it, in rods of livid, trembling flame, its course to remain mapped in fire like a half-healed scar. Then other wave crests were

splashed into spray and sent upwards in like manner, till the whole canopy seemed mapped out in stationary lightning.

Involuntarily we all cried "Oh!" "Glorious!" and similar ejaculations, utterly lost in this magnificent electrical display of Nature's own forming. Then the wave crests were again lashed as though by a hurricane into sprays of coloured flame, and in less time than it takes to write, the gem-spangled dome was one mass of flying fire. No sooner would one wave crest break and whirl away its fire, to shoot up in tongues of flame, which again dropped lower and lower, like blazing tears, than a wave would form again, like a wave of the sea on an angry coast, and each time repeat the glory. Always moving, always changing, this upward flight of fire was bewildering in its majesty, and the combinations and schemes of colour into which the numberless waves broke were intensely ravishing in their beauty. And all the time the umbrella-like dome dipped and curtsied like a brilliant coquette; then its edges became torn and lengthened, and there fell streamers of many-coloured fire, hanging down and wafted and doubled, like ribbons in a breeze at a carnival. At times there would fly across the

magnetic zone narrow tongues of differently-coloured fire, as if a roll of many-tinted ribbon had been flung with a giant's strength, and, unrolling itself as it passed, soon stretched across the heavens like a fluttering silk pennon, miles in extent, finally to fall to earth or be caught and flung across the universe. Then all these faded, giving place to another sea of glory, and there was a repetition of the former spectacle, except that this time the spray from the foam-lashed waves fell downwards, dropping like falling stars, spluttering and sending out fire-balls and stars of all conceivable colours. These again exploded, to send out others till all fell to earth.

After this had continued for some time, lightning flew from the rods on the ground below, and, darting upwards, the flashes were caught in one point and seemed to become tied together, forming a solid light. From this point streaks were dispatched in all directions, darting here and there, the whole forming a rude crown. This seemed to set fire to everything, for immediately afterwards the milk-white sea became a sea of fire, which poured itself back on the earth again in several places in a firefall of red and livid flame which came

to earth in one continuous stream, forming columns of solid fire which supported the heavens.

For several hours this continued, and then the discharge became less and less ; the columns of fire burned lower and lower ; the colour faded ; the brilliant gems and opals paled ; and in less than half-an-hour after this all had vanished except a slight phosphorescence near the rods. In a few minutes more even that had gone, and we now looked into a clear but grey sky, and before us still shone the strange light.

CHAPTER XXVI

THE JEWELLED CITY

“Fabric it seemed of diamond and of gold,
With alabaster domes and silver spires,
And blazing terrace upon terrace, high
Uplifted
Bore stars—illumination of all gems.”

WORDSWORTH.

WE were now less enthusiastic than ever to take up our rods, which seemed to be so very energetic, and we debated at some length the question of leaving them. However, inclination gave way to science, and our desire to bring them home overcame our natural reluctance to have them near us, as we never knew when they would become active, and what electricity they were attracting. After giving them plenty of time to cool off, we cautiously approached and gathered them up, then proceeded on our way. When we had come quite close to the wonderful light, we found it to proceed from inside a city, the walls of which were clear as crystal, the material being of blocks cut in facets which gathered and reflected the light in much intensified strength. These blocks were built

up one on another, forming a high, substantial wall, smooth and hard as a polished diamond, which it closely resembled. On coming nearer, it sparkled like real gems; the ruby, garnet, topaz, emerald, sapphire, and all the known precious stones seemed to have been used, but this effect was merely caused by the different shapes and facets of the slabs, some of which had been roughly dressed, whilst others were true as perfect ashlar.

Our contemplation of all this beauty was soon disturbed by the rods again unpleasantly asserting themselves and becoming slightly phosphorescent. We at once stepped back, when the glow left them, but returned on our going forward—we therefore again fell back into safety, and this gave Esdaile an idea, so he said, “I never thought of it before, but can it be that these things act as the safety pit-lamps do in the mine, and warn us of impending magnetic disturbance?”

“You may be right,” said Belt, “for they are not only highly magnetic, as we were told, but exceedingly sensitive.”

“I think we should take great care,” said Norris, “for the last caution we received was that we should be destroyed if we proceeded.”

“That is fanciful,” exclaimed Belt; “but it is quite certain that our presence here is causing considerable magnetic disturbances, any one of which would have killed us had we been caught.”

“The last one would have burnt us up in no time,” said Esdaile, “and nothing could have saved us, had not the rods taken all the current and so allowed us to escape.”

“I had not thought of that,” said I, “but the whole of the energy did appear to have been attracted to them, just as the copper tape conducts the lightning from the building it is fastened to.”

“Exactly,” exclaimed Norris, “and it goes to prove that we are not in our proper sphere when our mere presence upsets the calm of the atmosphere, which breaks out in an annihilating protest.”

Seeing the rods were now glowing with a phosphorescent flame, we placed them against the city wall and retired a little, this time looking on them as friends and *shields* from danger, instead of dangerous incumbrances; but what was our surprise to see that immediately they touched the wall, the electricity left them, but they became lividly magnetic on being taken away.

Therefore, either the wall insulated the current, or a wave of non-magnetic atmosphere encircled the immediate outer surface of the wall.

“That is strange,” said Norris, “surely there is now a solution to the magnetism of the earth.”

“How do you make that out?” queried the others.

“Because,” he replied, “if the free compass acts as I think, we shall see how the magnetic currents start.”

And so we commenced testing by the suspended magnets as already described, and found that the magnetic waves started from definite points round this wall and then spread, radiating outwards like the main lines from the centre of a spider’s web. These lines started straight, but were soon diverged by the attraction of the metal and other bodies in the earth, some very deep down, which deflected the needle and made it dip where the magnetic wave passed immediately over; whilst those waves passing up the “side” of magnetic ore and other magnetic bodies, were drawn from their course by such bodies, and assumed curvatures more or less pronounced: these are the waves of “declination,” and the “horizontal” waves are higher and curved by similar causes.

The magnetic waves all emanated from an imaginary line drawn about eighteen inches distant from this city wall and at right angles to it, flowing towards the north from each starting-place, being soon deflected more or less according to the nature of the ground or water.

The immediate space near the wall within the magnetic ring had no magnetism, the wall being apparently but a gigantic insulator. But of What? We could only theorize! It was too high and smooth to climb, and what made this impossible, was the fact that when we stepped into this demagnetized circle, we felt sharp, shooting pains in our eyes, which an immediate retreat did not relieve for some minutes, and a few more attempts left us with severe headaches and numbness, as though from a slight attack of sunstroke. The walls could not therefore be thought of, and so we sat down—with the rods about ten yards distant, crackling and sparkling and aflame with electricity—to debate our next move.

“Now what shall we do?” said Belt; “we seem to have come to a deadlock!”

“We cannot climb the walls, and the only opening seems to be that place round there,”

said Norris, pointing to a break in the wall, where light flooded out with such intensity that we could not tell what it really was.

“If we go in there,” said I, “we shall be burnt up, for that seems to me like a white-hot furnace.”

“I do not think it is that, but the current there would burn us to cinders,” said Esdaile, “so we shall either have to find some other means of getting in, or leave it.”

“I for one, *am* going in, if I die for it!” exclaimed Belt.

“I too!” said Esdaile, emphatically, getting reckless.

“Do not let us be hasty,” said Norris, gravely. “Antistes told us of a strange land where is a wonderful fount of life; in fact the secret of life itself, which none should know till the appointed time. Supposing he is right—and I feel he is—are we wise in striving to wrest from the Infinite what would make us sinful men equal with Him? Think what a power this would be in unfit hands! I say it with all reverence, but if inside there the secret of life rests, God *dare* not allow any less pure than He is to share it, or such a one would probably turn round on the Creator

Himself, and, in his ignorance, upset the laws of the universe."

"I think myself, we shall do better to let well alone," said I; "we have solved the magnetic and many other problems, and when we return home (if ever we do), the world will learn more from this expedition than from all the others put together. In a great measure I agree with Norris, for we have not wisdom enough to use this knowledge, which is only for God and His equals. For all we know, the withholding of it from us is God's greatest kindness; our untutored, imperfect minds *cannot* grasp the thoughts and designs of the Infinite, and a single idea, or thought of His, if put before us in all its unshielded majesty, would probably blast us eternally by its burning holiness." This was a long speech from me, who am a man of few words, but I felt very strongly on the matter.

"I quite see your points," argued Belt, "but I think your ideas are too fanciful by far. What Antistes actually meant was that the extreme south—the geographical pole—was dangerous to reach, and we have found it so, but still we are here and have sworn to all stand together, and to reach it or die, and I

for one am going past that wall by hook or by crook."

"We have had many warnings that we are on forbidden ground," persisted Norris; "and I think we should all be wiser to look at the matter calmly and be content to proceed no farther. I do not think it at all unlikely that the wall is but an immense insulator, to insulate the whole world from a gigantic force of electricity that would, without such a curb, annihilate every living creature on this earth."

"I don't think so!" declared Belt, dogmatically.

"Some such force is here," quietly continued Norris; "that enormous light is purely electric, and in spite of our insulated furs—which we had dipped in shellac and india-rubber, the best insulators known—we are even now feeling as if in an electric bath. Our clothing has no doubt saved our lives many times, but it would be no good whatever there."

"Anyway *I* am going to risk it," said Esdaile. "Belt and I will go together whilst you two stay here."

"No!" said I; "we have come together so far, and have sworn to remain so; if you are determined to stick to your vow in so mad

and foolhardy a fashion as this, and are set on casting all prudence to the winds, I will go too."

"I think with Tony," said Norris, "that it is weakness to carry a decision to such an extent. I am sure we shall bitterly regret it, if we go farther ; but I have said my say, and am with you and we live or die together," and he held out his hand. So we all shook hands, and again cemented our previous determination to do or die.

CHAPTER XXVII

THE GUARDED PATH

“Fools rush in where angels fear to tread.”

POPE.

HAVING definitely decided to carry the adventure to the very end, we now discussed the best method of entering this strange city.

We went along the wall for a distance of about fifty yards to where a river flowed, but were surprised to find no visible outlet.

“How do you account for the fact that this water is not magnetic?” asked Belt, after putting in his hands and feeling no shock. “Water is such an excellent conductor that it should carry the current from the other side of the wall. See, it flows from the inside.”

“So it would,” replied Norris, “if it came here through an archway, or grating; but it seems to soak through the wall like water through carbon in a filter, thus the wall perhaps also insulates the water and makes it safe.”

This seemed to be the only explanation possible.

For several hours we wandered on, failing to

find a point of entrance, and at last came to the opening already mentioned, where the light was so dazzlingly white that it was impossible to look at it. And what heat! already we were bathed in perspiration, yet we dare not remove our furs, although the heat was almost unbearable. Our snow-glasses were useless in such a blinding light, so to darken our sight the cloth flaps were drawn over the transparent masks, but this not proving sufficient, we burned sheets of paper from our pocket-books, the charred remains of which we spread over the masks and kept them in place by the cloth flaps.

We were now able to look into this dazzling opening, and what was our astonishment to find it not a furnace, but a wide gateway, across which was a magnificent gate made of some material like gold, but which shone with the prismatic iridescence of opal or pearl; the whole surface was phosphorescent, forming a halo of light. Through the bars could be seen a pathway bordered with shrubs and flowers in negligent order, a profusion of bloom, and on, or surrounding, everything was the peculiar blue-white glow, flitting and flashing like a fluorescent screen, or vacuum tube in active current.

“That’s fairy-land, if you like!” said I.

“Or rather heaven!” exclaimed Belt, for the moment overcome.

“Nonsense,” said Esdaile; “it is merely in magnetic field. Let us go up and rattle at the gate, and if no one comes we will climb over.”

“You fellows are really determined to go?” asked Norris; “because I firmly believe that if we once step into such an electric field as that we shall be shrivelled up!”

Both Belt and Esdaile seemed to waver, and with Dutch courage Belt asked me, “Are *you* afraid?”

“Yes, I am, awfully!” I answered; “but I do what you all do, and we sink or swim together; only do be warned, for no earthly being could live in such a place!”

“We will go and risk it,” said Esdaile, too foolishly proud to own that already his heart was not in it, and anxious to get on lest his courage failed altogether. “Perhaps these rods will protect us, as before, by conducting the electricity away from us, being better conductors than we are.”

So we approached the gate with many misgivings, and could now hear the slight, spluttering crackles of electricity; but the gate was

firmly shut and could not even be rattled, so all of us started to climb it. This was not difficult, and soon we were on the path at the other side.

With a strange tingling in our bodies we advanced. The rods now became powerfully affected, sending out little lightning flashes in all directions. Strange to say, we were not injured, merely feeling the tingling sensation of a slight galvanic shock, not severe enough to make the muscles rigid.

All around us grew flowers, and bushes too high to be looked over, and too dense to see through, so we continued our progress on the path; everywhere was the same glow of light, the air itself being luminous vapour.

“Did we not say we should be safe enough?” said Belt to me.

“We are not out of the wood yet,” I replied.

“No,” said Esdaile; “but if it were going to do us any harm, it would have done so before now. I think the current is so great that it goes through us.”

“No, it does not,” I asserted, “or we should be rigid—but we are here and I don’t care how soon we depart!”

“Believe me,” said Esdaile, “the worst is over now, and we shall get through all right.”

“When we are through I will shout with the rest, but just now I am in no mood for premature congratulations,” I replied, grimly.

Esdaile seemed much annoyed, but Norris interposed, “Tony is right—it will be quite soon enough to congratulate ourselves when we are safely out.” And nothing more was said on the subject.

Here the path took a turn, and, at the bend, we saw a terrible and awe-inspiring sight; about twenty yards ahead the bushes ended, and we should be able to see the country beyond at either side. But about ten yards farther still, the ground seemed to be open, and out of the fissure came a roaring flame of electric discharges, and lightning—dangerous, vivid, forked lightning—played continuously from side to side like a terrible fiery whip. This lightning came and went, first in one direction, then in another, flitting and flying hither and thither, yet as though with a definite object; not for a second was the path undefended, lightning from one direction or another being stretched across it continually, effectually barring the way.

None dared move a step nearer to that terrible defence. “It is useless to attempt to

pass *that*," said Belt, "let us go through these bushes," and, in his impulsive way, before we could speak, he suited the action to the word and stepped off the path across some beautiful flowers to pass between two tall shrubs, but before he could even set down his foot, he was hurled back as though by a blow from an unseen hand. With a smothered groan, he fell amongst us, his body tense and rigid as iron. Owing to the necessity for keeping his clothing on it was difficult to do anything, but we gently unloosed the covering round his neck and face, and found the face and lips pale and bloodless; his features were horribly contracted, with the skin cold and clammy, and great drops of sweat stood on his forehead like clear beads. One of the rods was placed at his head, with the other end on the ground, and turned in various directions, and we were at last overjoyed to find the electricity had been drawn from him, for his body relaxed and he gave a deep sigh.

Still he was unconscious, and in such a state of utter exhaustion and collapse as to be on the point of dissolution; and to make matters worse, there now commenced another terrific discharge of electricity. The air seemed to take fire, and around us flowed a circle of light

like summer lightning, and from one to the other of us were great arcs of spluttering light, binding us together by heads and feet. We stood rigid, unable to move even an eyelid, though faintly conscious of what was happening. All the other experiences passed through, sank into insignificance beside this display of which we were the centre ; poor Belt was already so covered with flitting flames that his body was brilliant as an arc-light carbon, and we were thankful he was dead. We ourselves had no feeling of shock, all was numb and cold, and this loop of light which bound us rigidly together was terrible to see. From every hair of our furs struck out sparks of light—long sparks, crackling and spitting, until we, like Belt, were one mass of livid light. Thus each of us stood, with numbed brain, totally indifferent to anything, watching the lightning playing about us, and drowning us in a whirling sea of electric fluid. How long it lasted, we were unable even to guess, but slowly the storm spent itself. No longer were we bound together, but still we stood rigid, unable to do anything but watch Belt, who was still one mass of living, shooting flame, and to look at the rods which lay close by, the centre of a terrifying bundle of

lightning flashes. These became fewer and fewer and finally ceased ; still we stood rigid, but slowly feeling and sense returned as in a passing dream, and we could move about, but how weak we were, with little or no energy. We knelt down beside Belt, who opened his eyes saying very feebly, " What is the matter ? Where am I ? " Before any answer could be given he again became unconscious ; we were very little better, being utterly exhausted, and too dazed to feel surprise at Belt's unexpected recovery,—and we sank down into the unconsciousness of sleep, or weakness.

CHAPTER XXVIII

RETRIBUTION

“It’s easy to say, ‘Come, come, cheer up!’
When it’s some one else’s affair.”

GIRANOLI.

WE returned to our senses with a feeling of great thankfulness that the rods had again rescued us by taking the bulk of the force to earth. The enormous strength of the current had passed through us to the rods, which had miraculously befriended us; and now the danger was over, Belt was still eager to go farther, but we others had had quite enough. He pointed out that but a few yards farther on the bushes ended, and the interior of the city could no doubt be seen from there, and as the zone of lightning flashes was some distance forward—at least thirty yards—there could be no danger if we proceeded no farther than that point. Very foolishly allowing ourselves to be over-persuaded, we walked to the spot indicated, but now very slowly indeed, as we still felt weak and a little unsteady.

We reached the point in apparent safety, and

for the fraction of a second saw into the open space beyond. In that one brief glance, like the twinkling of an eye, we had a glimpse of a resplendent scene, peopled with thousands of radiant creatures, and far away, an immense glow like a gigantic column of wonderful gems, through which shone a peculiar light, as one could imagine coming from a lantern of jewels.

With that brief glance came a blinding flash of lightning straight at us, and we fell senseless !

* * * * *

Esdaile was the first to come round, and as his senses slowly returned, he fancied himself alone. Everything was as black as pitch ; so dark was it that he could not tell where we were. Around him he felt grass, and heard the whispering murmur of rustling leaves swayed by the breeze, and some heavy animal put a slimy, wet muzzle into his outstretched palm as he was feeling along. With a start of dismay he stepped back and fell over something, which turned out to be me, not yet recovered. Fearful of losing his locality, he tied a piece of cord, such as we each carried, to my leg and went to its full length, but found it impossible to describe a circle, owing to the numerous trees which caught the string. He judged that

we must be in a forest containing either domesticated or other harmless animals, but in the intense darkness he was unable to tell more. Returning on his line, he made short journeys in various directions, always to be pulled up by trees, except twice, when he bumped against some animals, one of which he felt all over but could make nothing of it, except that it was big, with a furry coat, and harmless, licking his hand with a roughish tongue. He now opened his furs, and found the air warm and pure. After exploring in this way for some time, he returned on his line to me and awoke me after much trouble. I felt a little dazed at first, and asked—

“Where are we? Where are the others?”

“I don’t know where we are, and I cannot find the others,” he replied, and told me what he had done.

“Let us tie both our cords to one tree,” said I, “and search in different directions, so that we can always come back on the line, and not get lost, or lose our starting-point.”

This was done, and Esdaile found our companions at last, some distance from each other and still unconscious. We got them round and brought them to the tree to which our string

was tied, when we all sat down on the grass to talk things over.

“ This darkness is very strange and intense,” said Esdaile ; “ were it not for the birds singing, I should say we were underground, in spite of the trees and grasses. The foliage is so dense overhead that not a glimmer of sky shows through.”

“ I think we had better get on and out of it as quickly as possible,” said Norris, “ or we shall be completely lost.”

Accordingly we rose, and tying ourselves together, we started on our search for a way out ; but the intervening trees got us in such a tangle that we were obliged to discard that arrangement and walk in single file, each taking a hold of the other's belt, Esdaile leading.

“ I am sorry the rods are lost,” he remarked ; “ I searched all over, but could not find them anywhere.”

“ I had forgotten those,” exclaimed Belt ; “ but I wonder how we have got here ; surely we are outside the city now ! ”

“ There's no doubt about that,” said Norris, “ for there everything was glowing. I expect we have been thrown out, or pitched into some underground place.”

“That cannot be,” said Belt, argumentatively, and we could tell he was inwardly fuming; “for there could not be birds, trees, grass, and a breeze underground.”

“Why not?” queried Norris, calmly ignoring Belt’s tone. “We have seen stranger things than that. I think we are underground, because if the trees were so thick, and vegetation so dense as to exclude all light, such a breeze as this would not be possible—it could not get in.”

“Then where are we?” asked Belt.

Again ignoring Belt’s aggressive tone, Norris quietly answered—

“We did wrong in entering that forbidden city and then going forward, against all warnings, and now we are paying for it.”

“I don’t see it,” retorted Belt, much aggrieved. “You need not have come unless you wished!”

“We are not going to quarrel, Belt,” said Norris.

“Well, don’t blame me then,” snapped Belt.

“I do not blame any one so much as myself,” replied Norris; “but you have all overlooked one thing—that the lights which Antistes gave us, and assured us would never fade, are out now!”

This took us all by surprise, although why I

do not know, for we might have noticed that something was wrong, or we should not have been in the dark; and then impulsive Belt, who was a good sort, but somewhat touchy, said humbly—

“Forgive me, Norris, old man, I was a fool to behave as I did, and am awfully sorry! We *have* done wrong, I am sure. I had quite forgotten the lights we had. Unfortunately, apologies are usually too late, but I do sincerely ask you all to forgive me for bringing you into this disaster of losing the lights, for *I* am the cause of it.”

“No!” said Esdaile, from the front, “I am to blame, and I alone. Norris and Tony wanted to go back, but I insisted on their promise being kept, and, like brave fellows that they were, they risked death itself to keep with us.”

“I alone am the cause of it all,” maintained Belt.

“No, I am!” said Esdaile, emphatically; and so these two good fellows were actually quarrelling over it, and we could not get a word in any way.

“We will not have it,” I managed to get in at last; “we are all equally to blame, and let that be the end of it.”

“That’s all very well,” said Belt, dolefully; “but we have lost the rods and lost the lights, and how are we to do without either?”

“Just as we should have done had we never possessed them,” said Norris, cheerfully.

“Then we should never have lived to come here,” said Esdaile, “and we have not got to the Pole after all.”

“No, but we have *seen* it,” I answered, “and no mortal man has ever done *that* before.”

“Why! do you think that pillar of light was the pole?” asked Belt.

“Yes, I do,” I replied. “If you remember, Antistes said the secret of life was there, but none could know it till perfect. He said it was the seat and essence of electricity, which accounts for what we have passed through, and which to my mind was Nature’s own protest against our presence.”

“I quite agree with your idea,” said Norris, continuing reverently, “and I believe but for the Divine, miraculous intervention, the forces of Nature alone would have killed us.”

“How do you mean?” asked Belt.

“We are not fitted to be there yet, nor ought we to have been. When we went, Nature herself met the foreign element of our persons

and would have destroyed us, but for God's providence, just as it would need a miracle to keep a drop of water from changing, if thrown into a hot fire."

All this time we were going onwards we knew not where, bumping into trees and animals much oftener than we appreciated. Belt broke the silence into which we had lapsed by saying, "I think we ought to be very thankful for our deliverance so far—I, particularly, especially as I was rash enough to want to wrest such a secret from the Creator. I might have been sure it would not be permitted; and supposing I *had* succeeded, I should have cut a sorry figure to have the secret of life in my hands! It is a mercy I am allowed to exist at all."

"Some day, all being well," said Esdaile, "we shall all know, and then, instead of blasting us, it will make us the same as those whose very appearance was too holy to be even looked upon by such as we."

Thus we talked the matter over, devoutly and thankfully; happy in the feeling of Divine protection and goodness in sparing our lives and leaving us our food.

We were at a loss as to the direction in which we were travelling, for we were unable

to see the compass, not having a match amongst us, and we feared we might be walking in a circle. Weary with groping in the intense darkness, we sat down to rest and eat our frugal meal from the food given us by Antistes, of which some remained. Here Esdaile found a couple of matches in his pocket, and a compass was placed close by. One of the matches was struck and then we made an appalling discovery ; the match gave no light ! he struck the second, and held it between his fingers till it burned them. Belt cried impatiently, " Why don't you strike it, Esdaile ? "

He replied, " I have struck two, and they have both burned away. Oh, dear ! don't you understand ? If you have not seen them, we are all stone blind ! "

CHAPTER XXIX

FORGIVEN !

“ Sweet are the uses of adversity.”

SHAKESPEARE.

Now we were lost indeed.

Whether our lights were still shining or not we had no means of telling, as they gave out no heat, so we still sat on the grass as we were, too troubled at the moment to commence again wandering aimlessly. All our other troubles and difficulties sank into insignificance beside this last great disaster of blindness, and for some time we talked of the cases we had known where the blind had been made to see, but in all of them a surgeon or specialist had been the guiding hand, whilst here we were without the necessary help or knowledge, and none of us knew what to do. However, further discussion brought us to a possible solution which suggested a remedy. We knew that extreme brightness causes a contraction of the pupil of the eye, and guessed that in our case this contraction had been so severe as to bring the sides so tightly together as almost to paralyze them, or in some

other way to hold the muscles rigid. We then remembered that some misguided ladies use belladonna to brighten their eyes, because it has the property of dilating the pupil by relaxing the muscles. My comrades at once urged me to find some belladonna—rather a large order for a blind man in a strange place. As well might they have asked me to find the man in the moon ; but I said—

“ If we could find such a herb, we might also find people, or at any rate shelter, because it is remarkable that it usually grows in the neighbourhood of towns or ruins.”

“ Do you think it likely that we shall find it here ? ” asked Norris.

“ I fear not,” I answered, “ as it is usually found in the southern and middle portions of Europe, and also in Britain, but is not found far south, although the temperature and climate here are favourable. You all know its characteristic smell ; keep your noses sharp, as we cannot hope to find it except by smell. The plant is from eighteen inches to four feet high.”

All now started on the search, which we felt was for life itself to us. Too intent to speak a word, but hand in hand, at arm's length, we sniffed and sniffed as we walked along, till our

noses felt quite sore, but nothing of the nature of belladonna could we detect.

Never had I admired Norris so much as now. He was a cool, calculating scientist, never saying or doing anything without cause, but throwing his whole soul into everything he did, and though brave, never running into danger unless it was necessary, when he would go through with it to the very end, as coolly and methodically as eating his dinner. Esdaile, who, like Belt, was impulsive and a little uncertain, began to complain, but Norris's gentle and quiet acceptance of the situation we were in, and his hopefulness, cheered us far more than he was aware of, for we were on the verge of despair, when he said, "When you have trained us to this business, Tony, I should like to go on some of your expeditions as your smeller;" at which we all laughed. Simple as was the expression, and really nothing to laugh at, yet we were so down-hearted that it just gave us the fillip we needed, and was a real pick-me-up. He said no more, but in my heart I thanked him for his kindly joke, as no doubt the others did.

Belt was leading, as he had but one hand to be grasped. All at once he cried, "Stop! I think I smell something like it."

With a little searching we reached the spot, and I gathered a few leaves and felt at them. Almost instantly Esdaile became anxious at the delay, although I am sure I was scarcely a minute in deciding, when I said, "This is the *Solanum dulcamara*, or bittersweet, sometimes called the woody nightshade. It is common in the hedges of Britain, and where this will grow, the dwale, or deadly nightshade, may also be found, although it does not follow that it will be."

"Will it do as well?" asked Belt.

"No," I replied; "it is not so efficacious as the dwale, or belladonna, but may answer our purpose; let us gather some and try it, in case we do not find the real thing."

So we each gathered some and took the lot amongst us and proceeded; in a while we stumbled over some stones, and after passing these I got an unmistakable whiff, then lost it, then got it again. "Now we have it," I exclaimed; "follow me." And they told me after that I rushed straight along, bumping them against the trees, without any regard to their anatomy, but I think they exaggerate. Anyway, we all got there, when I carefully felt and smelled at the leaves and tasted just a little,

although there was no mistaking the disagreeable, heavy smell.

We discarded the bittersweet and gathered a considerable quantity of the dwale, and the next business was to find water. In this we had no guide but sound, so I suggested that we wet some of the leaves with saliva and stuck them on our eyes over the closed lids. We therefore sat down just where we were, and in the course of the next hour or two parted with such a quantity of saliva that we were all surprised to find so much in our systems; there seemed to be no end to the supply, but our throats and mouths became drier and drier until we felt as dry as lime-kilns. Still we went on, and never did any one doctor himself so assiduously as we did. The repeated application of the leaves, made into poultices by our own spittle, did wonders; the alkaloid atropia, which is found in all parts of the plant, at last relaxed the muscles and we saw several glows like stars, then after a while these became suns, and finally what was our delight to see unfocussed outlines of each other, and the dazzling white lights coming from all our caps.

Much moved, we shook hands, and thanked God for His goodness. How happy we felt!

And what a beautiful place the world was, with the singing of birds, the beautiful sky, and the glorious colour of the trees and underwood. The earth was a very paradise. There was no mistaking the fact that our temporary blindness had made us now look on nature in a new and wonderful light ; everything was *couleur de rose*; it mattered not to us how we had been transported from the interior of the city to the heart of a forest ; all was as nothing beside the blessing of sight restored.

We could not see very distinctly as yet, as the atropia had dilated the pupils so that the muscles refused to act quickly, and until its effect had worn off, everything would be out of focus, but that was nothing, merely a question of time.

“Now we must see where we are, and get back,” said Norris, and looking at the compass and map, we appeared to be in the south-west, and almost in a direct line with Mount Terror.

“We have not so very far to go, apparently, before we come to the ice barrier,” said Esdaile, “and then how shall we get on ?”

“Providence has kept us so far,” said Norris, “we shall not be stranded.”

“I think,” said Belt, “this voyage will

make new men of all of us, and so far as I am concerned, I hope better also.”

Without doubt our ideas had considerably changed since first we started, and perhaps the years to come would prove that these experiences had not been passed through in vain.

The forest we were traversing soon became less dense and green, and terminated in a few straggling pines, passing which we came into open country, when we could clearly see the ice barrier in the distance, and about twenty miles away was a city directly in our path. A few miles farther, and the character of the country had considerably changed; all trees had gone, and the landscape became pasture-land, the air being healthy and invigorating, like that on a wide moorland in England.

In about eight hours from our first sighting the city we came to its outskirts.

CHAPTER XXX

THE LIFE OF THE SOUL

“The soul that rises with us, our life’s star,
Hath had elsewhere its setting,
And cometh from afar.”

WORDSWORTH.

SEEING some of the inhabitants on the sward, we spoke to them, at which they looked greatly astonished and replied in English, expressing their amazement that we should have seen them. We were equally surprised to be answered in our own tongue, and asked how they knew English and why it should be strange for us to see them, considering they and their city were substantial.

“That may be,” one of them replied; “but we have previously been invisible to all in a lower grade than ourselves, and as for languages all are the same to us.”

“What language do you speak amongst yourselves?” I asked.

“Usually none in words, our language is thought,” he replied.

“We visited a city farther south,” said Belt,

“which was at first invisible, and they spoke English to us, but to themselves communicated by thought and colour.”

“We have not been, we do not go away from our own city,” he answered.

“At the last city, the people’s thought affected the colour waves; do you speak in this way?” asked Esdaile.

“No,” he replied, turning towards the city, we joining him; “certain ether waves are disturbed by our thoughts, and these waves, passing through all space and matter, carry their disturbance to those with whom we wish to speak, and they reply, so that we hold converse with each other with the rapidity of thought.”

“Do not others know what your conversation is about?” asked Belt.

“If they are on the same waves, yes,” he replied, “they know it at once; if not they know it later, but that does not matter, as all our thoughts are open to any one, and we like it so.”

“Do you mean to say,” asked Belt, “that whether you are on the same waves or not, your thought is understood by all?”

“Certainly,” he responded. “Thought never dies. You think of something, and those

thoughts are indelibly stamped on ether, which takes the impression through the whole universe; those who are on the same waves receive it first, and you are perhaps surprised that some one should think exactly as you do, and at the same time. It is merely that they have instantly received the same wave on which your thought was launched, and then it spreads to the utmost limits of the universe, just as when a stone is flung into the middle of a lake, the circle will spread outwards to the very shores."

"I never considered that our thoughts were capable of such influence," said Norris; "it is rather disturbing to know that whatever one thinks, whether it be good or bad, the whole world is influenced by it."

"We ought to guard our thoughts, and see that they are always pure and good, otherwise we *force* wrong and harmful thoughts into the minds of others, and cause them to err. On the other hand, if our thoughts are good and right, then we help others to keep right, and that is why we like to know our thoughts are common property."

"Then have you discarded speech altogether, amongst yourselves?" asked Esdaile.

“No,” he replied, “but, as you know, it is possible to think much quicker than to speak, and so we use thought, not because it is easier so much as from the fact that as we rise into higher and higher grades of life, the earth senses of speech and hearing become less and less necessary, for the soul becomes more and more spiritual as mind triumphs over matter, and thus the tendency is to cultivate and use mental efforts rather than physical. Further, by using the voice, we limit our conversation and usefulness to those only who are within hearing, and to our personal surroundings, but by the mind, our powers are untrammelled, and our circle of usefulness and helpfulness is capable of being spread through the vast unknown limits of creation. This is why we seldom speak except in thought, which travels with lightning speed and is felt, understood, and answered before words could even be formed.”

By this time we had reached the house of the master, or governor of the city, who was expecting us, being aware of our approach, how we could not guess, unless some intimation had come to him by the ether. He was very much like Antistes, and the people also were

similar to the Sons of Earth, but in a higher stage of existence. The master was exceedingly kind to us, and after listening to the recital of our adventures, expressed surprise that we had been preserved alive.

Norris asked him if they had lived before, and if he would be good enough to explain to us the object of these repeated births, or reincarnations, when he told us how the Creator had ordained that every soul should eventually be saved and raised to His equality—his explanation agreeing with that given to us by Antistes.

“Can we help or hinder this progress, or are we merely passive agents?” asked Norris.

“We are anything but passive,” he replied. “Every thought, every desire, every action is like a seed sown, which brings forth fruit abundantly, appearing as tendencies in future lives—nothing can alter this, it *must* work itself out—thus every wrong thought or action brings its fruit, which will be our undoing in a later life, and every good and beautiful thought brings fruit which will ennoble and strengthen us to resist the evil influences.”

“Then, when we think or do evil, is it the fruit of past evil?” asked Belt.

“Partly,” he answered, “but only partly; because the flowering of the seed of the past, is, in the present, also preparing the seed of the future at the same time. For instance, we have a trouble, or difficulty which we cannot understand, but which is, say, the fruit of some evil in our past existences. If we meet this badly, we sow seed for further trouble, which must again be met in a future life; but if we meet it bravely, striving our utmost to overcome the evil, or evil tendency, although we may fall time after time, this strenuous effort to do right not only eventually stamps out the old evil, but plants in us the seed of a good and earnest endeavour, which will grow and bloom in a later life to such perfection, that the old and troubling evil can no longer exist. Thus the present is the result of the past, and in living the present, we sow the future, either one of trouble, or, by plucking up the evil roots of the past and striving to live well in the present, we sow a good, pure, kind and unruffled future.”

“Do we come in the same form in the next life?” asked Esdaile. “Would that be possible?”

“I see no difficulty,” he answered; “the

worker in mosaic has thousands of small pieces of coloured material, which he arranges in any design he wishes. If he, in his limited capability can make any picture he wishes, and repeat the same time after time from his piles of coloured stones, or porcelain, is it a difficult matter, think you, for the Creator of the universe to re-arrange the atoms of which we are composed into the same form? Surely such a task to Him would be puerile in its simplicity! Have you never recognized faces you have never seen before, or felt that you know people whom you may meet for the first time?—'tis but the recollection of an intimate past. And have you not felt that some are to be avoided or distrusted?—such is the mental protest which comes from a remembrance of past injury. Thus the mind, if properly kept, may safely choose its friends.

“There are many ways of living, and each must work out his own destiny; therefore, if one does not act as *we* think to be right, to him it *may* be the best, and what we ourselves should do if in his place. The chief thing to see is the motive, and if that is good, pure, and wholesome, then the action cannot be otherwise than acceptable to God.”

“When perfection is reached, what do we do?” asked Belt.

“No one knows,” he answered, “but there is undoubtedly some good and noble purpose in our lives, some great scheme of existence which is far beyond our present comprehension. God has some design, and actually needs our co-operation and help, and He cannot work without us (for this are we created), so that the glorious work cannot be commenced till we are perfect and fit to be entrusted with our part in the vast design. Our various lives are, therefore, but a preparation for the commencement of a noble work with our Creator.”

“Would it not be better that we should have a little of this knowledge now, to help us on our way?” asked Norris.

“We do have it in the rest and contentment coming from good deeds well done, and as the lives recur, the physical part of our nature gives place to the mental, and we remember and benefit by our previous lives.”

Thus we spent some hours in instructive conversation with Ithēal, which was our host's name, and he told us much that was of deep interest to us.

His people were skilled in the sciences, but

with the exception of music, did not seem to touch the arts. All lived in community, each working contentedly for the general good.

Their chief occupation was the study of natural history in its wide sense, which included zoology, evolution, botany, and biology. Thus they went deeply into all matters relating to the life and habits of animals, birds, and insects; the gradual advance of all things animate and inanimate, from a rudimentary state to the higher and more complex conditions; the forms, structures, and tissues of plants, their functions, classifications, and the laws which govern their growth, properties, and colours, and distribution over the certain parts of the earth for which they are specially adapted, and why they are so fitted; and biology in its wide sense as the science of life, dealing with the life-characteristics of all animals and plants, such as morphology, origin, evolution, physiology, and distribution. In addition to natural history with all its branches, was the study of isodynamics, or the magnetism on the earth's surface represented by the varying intensity of force, the dip or inclination of the magnetic needle, and its declination from the true meridian, as illustrated by the isogonic lines.

Their food was very simple, the solid portion being flakes of a kind of manna, which they obtained by cutting certain cultivated trees near to the roots with deep cuts, when a secretion exuded which ran down and, in drying, formed flakes. These hardened and were then removed when they would keep any length of time. These flakes were somewhat like honey, of exquisite flavour and delicious eating. The liquid they drank was pure crystal water served in calabashes, or some similar vessels made from the dried skin of a species of fruit like the calabash.

We made the acquaintance of many of the people during our stay, and watched them in their scientific work. We spent several days in this city, with much profit, but though pressed to stay, we felt it our duty to return to the ship as soon as we possibly could.

CHAPTER XXXI

FRIENDS IN NEED

“Many friendships in the days of Time
Begun, are lasting here, and growing still.”

POLLOK.

WE went to the master, Ithēal, to talk things over. He was so wise and kind that we did not scruple to ask all kinds of questions; we told him about our discovery in Mount Champion, and asked what the laboratory was used for.

“That is for the study of hydrology in all its ramifications, such as hydrodynamics, hydrography, hydrostatics, and the like.”

“We thought these sciences were studied there,” said Norris, “judging from the instruments; but how is it the place is deserted?”

“It is not deserted,” said our host; “perhaps by chance you entered when the place was empty, but it was only chance.”

We explained our strange entrance, and that no door could be found, and inquired how it was possible for others to get in, begging him to tell us all about it. He therefore continued—

“Originally the range of hills was one great tableland, extending many miles towards east and west, and on this people dwelt. Their chief study was hydrology, and in order to get a great weight of water in specified quantity, they sank a shaft and built a laboratory deep under the earth, the descent being by the stairway. Owing to volcanic action, and the settling of the earth’s crust, which are natural events, the plateau was broken, but the people and their habitations, not being subject to accidents, were not disturbed. Thus the great rock and all it contained and covered remained, whilst the hills around were rent asunder. There was now no use for the steps, the outer ground being low, so a covering was built and the steps closed by a wall at the base. This wall was broken through by the falling mass cut out by you, otherwise you could not have entered by the steps. Had you crossed the mountain at the left of the great rock, instead of at the right, you would have entered the city, which now lies in the hollow at the south-west, and which I will show you shortly. The people have an entrance to the laboratory from the south-west side, which you must have overlooked, the long passage from the steps which you used being

now discarded. Had you looked over the south-west side, when at the top of the mountain, you would have seen the city nestling immediately below you—at least I should imagine so, the laboratory and instruments being visible to you.

“The people of this city carry on the study of all sciences connected with water, such as the effects of friction of water during its passage through the earth and air, its sound, heat, and effects on atmosphere and wind, its gathering grounds, formation of springs, rivers, wells, and lakes; all the laws of equilibrium, compression, buoyancy, and flotation; and in fact everything relating to the formation and action of moisture of all kinds in the earth and air. It is a pity you did not see the people, as they would have explained the instruments, which could only be done by actual demonstration.”

“Could you tell us why the temple of Ulka was deserted?” asked Norris, producing the map, which he handed to Ithēal.

“I am unable to do so without looking, but you shall see for yourselves shortly,” he answered.

“We cannot imagine by what means we were so forcibly expelled from the crystal city, and

how we came to be deposited a few miles away from here. Dare we ask you to explain it to us?" asked Esdaile.

Ithēal very gravely replied, "You were placed on waves of ether by the grace of our Master, whilst the rods, taking the full force of the 'life current,' were burnt into a vapour and destroyed."

"Then were we right in thinking that the rods protected us?" asked Esdaile.

"But for them you would have been utterly destroyed. They would have been given to you as a safeguard even if you had not asked for them," he replied.

"It is very curious that we were able to see the laboratory, the crystal city, and yourselves, if such are supposedly invisible!" I remarked.

"That is merely an illustration of what I have been putting before you of the effect of the 'good' on others, in helping to lift them up to higher things, and of the mind in causing actual good to follow good thoughts. You left the temple of Ulka with earnest and pure hearts, and your devout prayers and desires were answered by your meeting the people of the colour city; these prayed that you should be spared, and that nothing should come to you

but 'good.' Their prayers were answered, and the mere association with them covered you with a borrowed or reflected glory, which enabled you to see what is usually hidden from mortal eyes, nor has its effect even now entirely disappeared, as you see and hold converse with us."

Needless to say we felt very thankful and grateful to Him who, because of the prayers of a few righteous people, had protected us from dangers, both seen and unseen, and guided us safely with such a loving hand.

In further conversation, we asked the master if he could help us to pass through the barrier, as we wished to go to Mount Terror, which we showed him on the map brought from the temple; but what was our amazement when he said—

"You are in the barrier now! The barrier is of enormous thickness, as a whole," he continued, "but it is not all ice, and in some places it is comparatively thin. About thirty of your miles at each side of this small city, the range of hills takes the form of a broad incision, being but ten miles thick at the point of the incision. Our city is about midway between the cliffs at the broad end, almost opposite the point of

incision, or the thinnest part of the barrier. It is possible there may be a cave which you can pass through ; come with me and I will look at the photographs which we have of the district.”

So saying, he took us into another room and showed us a photograph of the actual spot referred to. The photograph was similar to those we had with us, brought from the City of Earth, and was full of detail, all being in natural colours. We examined this with great interest, and the master, explaining it, said—

“ Here is a cave which runs from here (this side) to the other side of the barrier. You see it opens out to considerable extent, but unfortunately, some little distance from the entrance, this river—a deep, broad, and strong-flowing river—crosses the path and empties itself at this point, nearly at the bottom of the sea.”

“ Then we cannot pass it ? ” said I, keenly disappointed.

“ I fear not,” he answered, “ it will be quite impossible. It is a lava cave, and but for the river, this photograph shows a clear passage through.”

“ A lava cave, and for so long ! How can that be ? ” asked Belt, incredulously.

“When lava flows in any quantity,” he replied, “the outer surface cools, whilst that inside is still liquid ; the gases cannot therefore escape, and so either crack the outer crust, and the lava flows out again—so forming a cave of its own covering—or the gases lift the still plastic covering up like a blister, when it sets hard and so forms a cavern between the two sections ; or the molten lava may flow over, or between icebergs, and the heat of it, gradually melting the ice underneath, causes it to flow away, thus leaving a hollow ; and the cooling of the lava on the outer crust, sets all together into a hard mass, whilst the molten lava in the inside runs away, thus forming a cave.

“This cave will be formed in one of these ways, and may be closed up at either or both ends by rubbish or ice, but we will see,” and he drew towards him a peculiar telescope, not unlike that we had seen in the temple, and directing it towards one of the walls, he focussed it, and looked a long time in silence. We began to be impatient, as he seemed to be looking at the wall, but at last, without quitting the instrument, he said, “Are you really anxious to go?”

Of course we answered, “Yes.”

“I should have been sincerely pleased if you would stay, at least for a time, though it could not be for long, unless you were specially protected, as you have been hitherto,” he replied, “but the way is clear, the river diverted, and the cave open at both ends.”

He then moved aside, saying, “The glass shows the full length of the cave ; do not alter it, but each look through in turn.”

We needed no second invitation, and took our turns at the glass. It was a marvellous sight. Close beside the entrance was an extinct volcano ; a little farther on, in sharp focus, and at the foot of an immense crag, was a small opening, the entrance to the cave, which opened out to very fair dimensions. About one-fifth of the distance through—two miles—was a broad, deep hollow, formerly the bed of a river, crossing the path at right angles. Looking up the stream bed to the left, the way was blocked by earth and rock, so that there must have been some volcanic action which had filled this in and diverted the river, which could be seen rushing down its newer and now easier channel. At some distance to the right, was an ice cavern, with ice hanging from roof and walls in fantastic shapes, and still farther on, the

whole course was blocked by a great mass of ice like a berg, beautifully shaped and coloured. Coming back to the cave we saw it went straight through to the other side, where the country was bleak, and desolate, and uninviting, so different from the spring-like beauty of the south side of the barrier, and even as we looked, a heavy storm of snow and hail came on and we lost sight of everything beyond the narrow outlet in a white sheet of falling snow. It was indeed strange to see spring at one side, and bleak, life-forsaken ice at the other, with but ten miles between. No wonder we became excited, and the master offered to photograph the spot for us, an offer which we joyfully accepted.

The telescope was then turned to Mount Champion, and we distinctly saw the city in a beautifully wooded valley behind a great wall of rock running from the mountain, and we blamed ourselves for not having turned to the left of this instead of the right, for by taking this wrong turning, we had missed the city and all it would have meant to us, besides having an unnecessary climb.

Scores of people could also be seen in the great laboratory, and we were much interested

to see them using some of the instruments that had puzzled us so much—so real was the sight that we almost essayed to converse with them.

Then we saw the temple of Ulka and found it was as we had surmised ; the ways from all the surrounding cities converged into one passage, into which the lava had burst and so cut off all access. Ithēal told us that the temple was holy, and the ether waves so arranged that the magnetic force surrounding it would repel all lava and volcanic action from its exterior, so that the building itself could not be destroyed.

He now turned the instrument to the cave again and beyond, and this time through the falling snow we saw miles and miles of ice, and bergs and rocks, and then Mount Terror, with our people on it and at its foot, and beyond that, Mount Erebus, and our good ship *Champion* wedged between the cliff and a lip of rock, and still beyond that was the ice pack and open sea—rich blue sea, with floating islands of ice dotted here and there, and gleaming in the sun like diamond flashes.

The sight of our ship in its predicament caused Norris to ask our host if he could help us to get the ship off and into the sea safely. Of course we could use gunpowder, but in

cutting off the rock we might injure the ship ; the climate also was too cold to use nitro-glycerine and such explosives, and if we used anything that would blow the rock away, the vessel might fall so suddenly as to shake all her timbers, if not actually to turn over ; at any rate, it was doubtful if she would be seaworthy if we got her into the sea by any method we knew of ; so we were very grateful to Norris for his wise forethought, and particularly so when the master said he would help us. He asked the weight of the vessel, the dimensions, and many other questions, which we answered as well as we could, and then he took a long look through the telescope ; we thought he would never leave it, but at last he got up, took us into a laboratory similar to that in the temple, and selecting an instrument like a sextant with telescope, he again took a long look, then made some mental calculations, and at last said—

“ In the cliff beyond your vessel you will find a quantity of iron pyrites, which is of a bright brass-yellow colour and unmistakable. You must take a great quantity of it and spread it on the inside of the front rock, between it and the ship. The front rock is dolomite, or bitter spar, and is, as you may know, a form of

limestone, being a mineral composed of double calcium and of magnesium carbonate. Then when the mass of pyrites is under the ship at the sea side, pour on it a plentiful supply of water and keep it wet; the water and air will turn the pyrites to sulphate of iron (vitriol), during which change much heat will be evolved, so you must be careful your ship is not injured. The vitriol will then act on the dolomite, which will effervesce freely when wet with the acid, and will gradually be dissolved, and as it dissolves, your vessel will slide down into the water on an even keel and so launch itself. Pour the water on the vessel, letting it run off the hull on to the pyrites, so will your ship be kept clear, cool, and free from injury by the acid evolved.

“If you keep the rock constantly covered with pyrites, and that well wet, and your vessel supported with props and ropes for protection and to keep it on an even keel, you will be safely floating in a few weeks. See, look through this, and you will find the pyrites in great abundance and shining like gold; the rock against which the ship is wedged is hard granite containing an abundance of mica, and at that side of the ship nearest the sea is the

mass of dolomite rock, the base of which you can dissolve away till the top tumbles in the sea." And he motioned us to look, and we *did* look, in an ecstasy, as the whole scene was brought to within twenty yards of us by this wonderful instrument. We thanked him very profusely, when he deprecatingly replied, "There is nothing wonderful in it, the matter is but a simple chemical experiment, demonstrated on a large scale." So of course it was, but our small minds would never have thought of such a thing.

Then he said: "You will see the ice where the ship will fall is comparatively thin, and if your figures for the weight of the vessel are correct, this weight will break the ice and your ship will float; you can then see your way out for the short distance which you see, when you will be in the fairly open water which is plainly visible."

We knew not how to thank him enough, but he said he was amply repaid if he could render us any assistance.

We asked if we could signal to our ship, but he said "No," as those there had no means of receiving the message.

He now suggested that he should take some

photographs, the first taken being of the cave in the barrier, and following these were many others, showing the whole of the ice belt from the north, on towards the west, and so right round the compass to the north again. He used a similar instrument to that in the City of Earth, but the resulting photographs were much better both in colour and detail.

We begged to be allowed to photograph him and his people, but he would not hear of it, as he said photography with them was not for pastime or decoration, but for definite purposes of study, and was a serious and scientific matter.

He gave us all the photographs we had seen him take, along with many others, and as we prepared to leave, he very generously gave us present after present, until we each had almost as much as we could carry when all the instruments, lenses, and wonderful gifts had been put together. These presents included a telescope each, similar to that we had looked through, and which we often use now, but have never been allowed to see him again, though he probably sees us.

We were all too friendly to be jealous of each other, nor should we have been, whatever

had been given us ; but Ithēal may have foreseen a danger in this respect, for when we came to examine our gifts later, we found that in every detail they were identical, for which we all felt grateful.

We now prepared to set out on our return journey, regretting the parting, yet anxious to go. Ithēal and his citizens bade us a friendly farewell, and we departed on our four days' journey to the cave, which we duly reached.

CHAPTER XXXII

NATURE'S HANDIWORK

“It is this earth that, like a kind mother . . . is never found an enemy to man.”—PLINY.

WE entered the cave, which widened out as we had seen it through the telescope, the roof being at least ten or twelve feet above our heads, and the ground perfectly level till we came to the watercourse, when we climbed down the banks to the river bed some thirty feet below.

“This must have been a terrific river,” said Belt. “Look at these rocks, each as big as a house and rounded like pebbles.”

“It would make a tremendous roar,” responded Esdaile, “and probably be similar to the river we saw in the City of Earth.”

“Such another, I should think,” agreed Belt; “it is fortunate for us it is dried up.”

At this place, bosses and excrescences had accumulated in various parts of the bed of the torrent; there was also an oozing from the roof, and these stalactites had gradually lengthened, and the stalagmites increased, till they had, in

places, united, forming great pillars, as though to support the roof.

A few miles farther on, there depended from the roof large stalactites of shining, black, glassy-looking lava, some so low as to touch the ground, while in other places were many very peculiarly coloured, and Esdaile asked Norris why they differed from the glassy ones. He therefore explained—

“ In the flow of lava, the outer surface hardens, and the expansion of the inner bursts it, and the liquid runs out leaving a hole, or tunnel, often itself filling up the crack it has made, but the last portions, being cooler, or more solid, and too thick to run, fall by their own gravity like molten glass, becoming cooler and cooler until so congealed that they will run no more. These are pure lava ” (pointing to the large, glassy stalactites), “ those ” (pointing to the others) “ are quite a different substance. Water has run, or drained in, and, in passing through the atmosphere, and the decomposing organic substances in or on the soil, etc., has become acidulated by containing a greater or less proportion of carbonic acid. Such moisture containing carbonic acid will dissolve limestone by taking up a portion of the carbonate of lime,

and converting it into bi-carbonate, which is soluble. When it gets out here through the roof into the air, evaporation takes the carbonic acid away and leaves a thin incrustation of carbonate of lime. The droppings, falling on the ground, likewise give up the soluble matter by evaporation, and both getting larger as more is added, form stalactites from the roof, and lumps, knobs, and other shapes, called stalagmites, from the ground, in time meeting. That is, I think, the explanation."

"Is the formation a lengthy process?" asked Belt.

"That entirely depends on the quantity and rapidity of ooze and temperature of the cavern," answered Norris. "I have seen caves where the process has been going on for thousands of years, and only a few feet have been added, whilst there are some caves in Derbyshire, where the formation from roof to floor has been completed in twenty years. The same with petrifying springs and wells, some complete the work in twelve months, some in a few weeks. It entirely depends on the nature of the water and power of evaporation."

Every step we took brought some new feature of interest to us, and we went happily and

joyfully along, thankful that a way out of our difficulties and dangers had been opened out, and we were full of hope and eagerness to see our comrades once more.

In about five hours we saw a faint light like a spot in the distance; this became larger and lighter as we drew near, until it resolved itself into a narrow streak of white ice, and, lying down, wriggling through the hole in the rock, we were once more on the north side of the terrible ice barrier, all having fallen out exactly as we had been shown.

From this side, the hole looked more like a fissure in a berg than anything else, and no one would have dreamed what lay beyond, or thought of entering. We marked the place as well as we could and proceeded in the direction of Mount Terror, but after going away a few yards, even we ourselves had some difficulty in picking out the cave entrance from the number of fissures, ledges, and openings with which the surface of the rocks were covered.

This would never do, so we returned and examined the place carefully for the guidance of future explorers. The cliffs at this point are of hard granite, strongly impregnated with mica, and rise to a height of from three hundred to

four hundred feet, with the face almost vertical. In one cliff, about sixty feet from the ground, are three large fissures closely resembling the sacred sign of the Trinity of the Tau—incorrectly called by some the Triple Tau—much worshipped by the ancient Assyrians. Immediately under this is what at first sight appears to be a vertical crack in the rock face, about sixteen inches wide at the bottom, and gradually narrowing as it ascends, forming a long triangle. At this unmistakable spot can the barrier be penetrated, and at no other place, so far as is known at present, and so far as the glass and photographs of the whole barrier showed us.

In approaching from the sea, a straight line should be struck from the centre of Mount Erebus to half-a-mile west of the centre of Mount Terror, and thence forward to the barrier, when the end will touch the fissure already described. This fissure should be entered, and the cave is then seen at the left of the split, the entrance being about three feet high and two feet wide, and almost immediately opening out to a wide cavern.

We now commenced a long and terrible journey on foot towards Mount Terror. After proceeding for some four or five hours, we

were wearied out, for our packages felt heavier every moment, so we sat down under a berg to rest, after which we started again, but weighted down as we were with clothing and parcels, the tramp was both heavy and fatiguing, and long rests had to be made every few hours.

The way was rough, and made dangerous by a recent fall of snow ; many times we climbed ice-covered hills and rocks, to receive nasty falls from the giving way of the snow, it being impossible to tell which was rock, ice, or surface-hardened snow. For over a week we made as near as we could a bee-line for Mount Terror, when one day, as we were resting, we were startled to hear, coming through the rarefied atmosphere, the distant but unmistakable throb of a motor. This came nearer, and we could now distinguish the familiar scream of the rapidly-revolving wheels. A few minutes more and two of our own motors, driven by Carleton and Morgan, the first mate, came into sight, aiming straight for us ; they were elevated about twelve feet from the ground, and skimmed over and around the various obstacles like swallows. We jumped up and fired a revolver, at the same time shouting lustily ; the sledges slowly fell and travelled towards us and pulled up.

CHAPTER XXXIII

RESCUED

“Never was meeting so happy.”

DRYDEN.

“How thankful I am to see you safe again,” cried Carleton, jumping out of the car and holding out his hand in an ecstasy of pleasure; “but what on earth are those?” pointing to our head lights.

We were all too much overcome by the happy meeting and overwhelming welcome to answer, and too busy shaking hands all round to think of anything except the re-union, when Carleton took hold of Norris’s shoulders and turned him round, saying—

“You have not answered my question, Norris! Where have you picked up your lights?”

“We had them given to us in an underground city. What we have to tell will make you open your eyes, as we have passed through the most remarkable adventures ever experienced by human beings as we know them. But get us something to eat, there’s a good

fellow; we have lived on water till we are tired of it, good as it is."

With his usual admirable forethought, Carleton had prepared some meat *en route*, and almost immediately a welcome sizzling was heard from one of the sledges, and soon afterwards we sat down to a decent English meal.

As we sat down Esdaile said, "And now, captain, tell us what you have been doing since we saw you last; our story is too long to tell you till we have had a meal."

Carleton therefore recounted what had passed in the interval:

"Soon after we saw you enter the crater, leaving the men on the top, a snow-storm came on, so I sent Sharpe, the second mate, with four men, to follow in case you needed assistance, but the snow was so blinding that they could only see a few yards before them. In half-an-hour the snow ceased, but a gale of wind followed; they reached the party you had taken up, whom they found entering the place where they had seen you shelter. Knowing the arrangement, that each was to carry with him certain necessaries, and also knowing you each had ropes and plenty of food, they

thought you had gone down to explore the lower beds, or shaft."

"Yes," said I; "we sheltered in the opening, and the bottom gave way, so we were compelled to explore!"

"I waited for several days," the captain continued, "but when a week had passed, I became uneasy and sent out a search party with ropes, etc. They got to the bottom of the shaft and saw your traces, which were followed as far as a rapid subterranean river, where they ended, and we concluded you were drowned in trying to swim it. The party returned, and I waited till after the time for which you had provisions had expired, and thinking it was possible you were exploring, and not drowned, and that you would then go on short commons, we waited a little longer. In the meantime, I fixed three men at the top of the shaft in the crater, with a telephone, to be in constant communication, two of them to be always watching in order to keep a sharp look-out over the whole interior of the crater. Three also stayed in a cave beyond the foot of the mountain. These also were to watch in couples, and were provided with a telephone. The rest went back in the sledges to the ship, and we explored

the coast, and have done some good work in water currents, temperatures, dredging, etc.

“One day we received your message, we thinking you were at Mount Terror, the two parties there thinking you were with us, for as all the instruments were constant and in unison, the message went simultaneously to all. As I believed you were at Mount Terror, I thought you were joking when you said you were in an underground city, and was considerably astonished when the other parties asked me where they were to meet you, and would I send a car for them. Finding you were not at any of our three points, and that we could not get into further communication with you, I first became alarmed, and then, knowing you must be safe, or you could not have telephoned me to say so, I followed your instructions to wait at Mount Terror; at least one party has always been at the summit and another at the base of the mountain, those in the ship relieving them by taking turns at the stations.”

“And how did you find us at last?” asked Norris; “I am sure we have given you an awful amount of trouble, old man, and we cannot thank you enough!”

Before Carleton could answer, Belt broke in,

“When we tell you where we have been, and what we have seen, you will say that this expedition has been the most successful the world has ever known!”

“I am very glad to hear it,” Carleton replied; “we also have been successful beyond our highest hopes; we have discovered something over four hundred miles of new coastline, and lots of other things which we can go into on the ship. At the same time, you may be sure I have been exceedingly anxious whilst you have been away, but we must not be separated in small parties again; it really is not safe!”

“We need not be separated at all again,” said Norris, quietly, “for our voyage and explorations are ended.”

“Ended!” exclaimed Carleton, in astonishment. “Why?”

“Because all we came out to see and do, is more than done,” I replied; “and all we have to do now is to get back home again and set the Thames on fire. But if we start telling you all now, you will get nothing to eat, and you have scarcely touched your dinner yet.”

Then Norris began to tell what had befallen us, but all were so eager to listen that they

stopped eating, forgetting in their excitement all about the meal we were having, so he said, "I will say no more till we have finished dinner." So there came murmurings and whisperings up and down the car, but nothing further was said till all had finished, and then Carleton began, "I must confess I am more than anxious to hear your adventures, but we can talk as we go back. As I was saying, after your message, some one was always looking out for you from Mount Terror, the rendezvous you had appointed, and six or seven times Morgan or Sharpe, and I, went up to reconnoitre in the balloon, which we have repaired, but not a sign of any living creature could be seen, except a few walruses and sea animals at some distance away. Then from Mount Terror I got a message that several flashes of light had been seen through the glasses once and no more ; wondering what it might be we got the balloon telescopes, but we were not high enough, so we took the balloon to Mount Terror and rigged up a windlass, and made a substantial fastening. Morgan and I went up and made out four moving figures with flashes of light coming from each."

“What did you do then?” asked Belt, excitedly.

“We saw the lights move in our direction more than in any other, so concluded the figures were moving this way. We therefore got your bearings, and came down full-speed without a stop. It is now about a week since you were first sighted at the mountain, so you see we have lost no time in getting here.

“We had come from the ship in one car, and another was at Mount Terror, so Morgan telephoned for another to be sent on, provisioned and fitted up as we always keep them, and we started in the two, leaving the rest of the men to pack up the balloon, etc., and return in the car we had telephoned for. You could not be seen from the lower level, so we steered by the compass, and I think the finding of you safe and sound is the end of the story so far as our part of it goes.”

“You are a good fellow,” said Norris, “and I don’t know how we can repay you!”

“You have repaid me in letting me find you, and if you would repay me more, tell me of your success and travels. Anyway, whatever you may have passed through has not impaired your appetites,” he said, laughing.

Now we are none of us given to eating unduly, or even considering that important item of existence over much, but if any one wishes to thoroughly enjoy a meal, served and cooked to perfection, and composed of stuff one has been accustomed to since the possession of teeth, it is only necessary to live a few months on water only, as we had done, and be in a cold country with the full vigour of healthy manhood in one's veins. So that without having overstepped the bounds of appetite, but from sheer enjoyment of our food, Belt expressed our feelings in a nutshell when he exclaimed, "There! I never enjoyed anything so much as this before! What a blessing it is to have an appetite!" and I could not help adding, "It is a still greater blessing to have the food to satisfy it," because we had been blessed with appetites all the way through, but the right food had been lacking.

"Now we are as tight as rivets, and are ready to be off," said Esdaile, to Carleton. "How do we travel?"

"Any way you like," he answered.

"Suppose two come in each sledge," suggested Morgan, "and then they can tell some of their adventures to each party; I am

sure the men are as anxious to hear as we are."

That settled it. Belt and Esdaile went in the captain's sledge, whilst Norris and I joined that of Morgan, the first mate. Morgan would not let either of us drive, so we sat behind him, and all were ready to start, when Carleton from the other car said, "I am just ringing up to ask those at Mount Terror to wait for us and we will all return together." And a minute later we heard the message sent, and also one to the ship to ask all the crew to meet us with a right royal welcome and salute.

Then the men in the other sledge cheered, ours answered and we started on our return journey.

When we reached Mount Terror, the men in the car there begged for one of us to go with them, so Belt went, and began the story to them; and when we at last reached the ship and had got over the hearty welcome there, we made a night of it, giving in turn, as one got tired of talking, a rough outline of our remarkable adventures to the whole of the crew. All on board had a meal of our wonderful water-food; our lights were handed round, and hour after hour we sat and talked—talked

till we could speak no more. It was a time of great rejoicing, and when at last we turned in to rest in our own berths, we felt overwhelmed with gratitude to Heaven for our safe return.

CHAPTER XXXIV

PEEPS INTO MATTER

“It can hardly be pressed forcibly enough on the student of nature, that there is scarcely any natural phenomenon which can be fully and completely explained without a union of several, perhaps of all, the sciences.”—SIR JOHN HERSCHEL.

FOR the next day or two everything was disorganized; all the crew had to see our photographs and instruments again and again, particularly the telescopes. These excited untold admiration and curiosity, and no wonder! for through them we saw the City of Earth and the temple, which not only confirmed all our statements, but put such an uncanny aspect on things that none of us were ever tired of looking, although the power to see beyond the barrier through them was never permitted us.

Many who read this will have already seen all these things on our lecture-tables, and will quite appreciate the dismay which comes over one after looking down one of these instruments, and seeing people in various parts of the globe living and moving about, following their various occupations, all as clearly seen as if a few feet

beyond the bottom of the lens, and then to look away and find a blank wall, or one's own room instead. The change is really a shock. Nor is light necessary, for if the instrument is in the dark the object seen may be in some sunny land where it is then day ; and one mixes with the people, and loses one's sense of being a thing apart, till the sight wearies, and one looks away for relief into the pitch-darkness of night. No wonder such instruments of another life seemed to savour of magic, and yet it is but a very high development of the science of optics. But as I said just now, these have been often seen and described, and therefore need not be dwelt upon. In the first flush of newness, however, the captain was as bad as the rest ; discipline was relaxed, and everything given over to the recital and re-recital of our adventures, and often as one or other looked at something wonderful and almost past belief, had it not been there in actual reality, he would ask something about it, and again the story would be related for the hundredth time, and at the recital of it the men would flock around as though they heard it for the first time, and listen in rapt attention, scarcely daring to breathe ; when the story was finished, perhaps

with the words, "and then he gave us this," they would crush up and look at what they had been examining for hours as if it were newly exhibited. Nor were the men alone in this, for we were just as bad, perhaps worse. Even now, although we have each lectured on the voyage dozens of times and exhibited the gifts each time, yet I am never tired of going over them, and do so at every opportunity.

If ever I am missing and wanted, my wife always comes to my curio-room, and ninety-nine times out of a hundred finds me looking through the telescope at some hidden roots, or at some glorious orchids growing thousands of miles away under tropical skies.

She will come up and lean over my shoulder, saying, "Come, dear, is it not time you gave up?" And I probably reply, "Just look at this man climbing up these trees, gathering orchids!" And she looks, saying she can only stop a minute; and then we look and discuss and watch him, till he perhaps disappears down the throat of an alligator—as we once saw one do when he fell from a tree into the water—and we find we have been looking for two or three hours, nor can we ever tire.

But to go back to my story. We found that

under the direction of Carleton an enormous amount of good, new work had been done in our absence; besides the exploration of the four hundred miles of new coast-line, he had got the nature of the rocks, valuable information as to tides, soundings, currents, sea animals, dredgings, magnetic waves, and some hundreds of excellent specimens and photographs; but as these were fully dealt with in the report read before the Royal Society, and since made public, it is not necessary to enlarge on them here.

We were highly delighted and deeply thankful, as indeed we had cause to be.

We set to work to liberate our vessel as we had been directed by Ithēal. We found all as he had described, tons and tons of pyrites, an inexhaustible supply, or so it seemed, and for weeks we were getting ready for the grand climax, which turned out a huge success in every detail. Slowly the *Champion* slid down, stayed on all sides by hawsers working in pulleys, which were firmly fixed in the granite rock and the ice, so that she preserved an even keel. On the seventeenth day (instead of three weeks) the mass of dolomite toppled over into the sea, crashing through the ice and

clearing it all away for a great distance around. In about fifteen minutes after the rock had sunk, our ship slid into the sea on an even keel, bobbed up and down as if testing the element, and, finding it to her liking, floated with a succession of kisses on the water she loved so well, and we were once more safely afloat. Everything was gathered in and the boat made ready for the voyage, and we steamed along for half-a-mile, when we came to an ice floe. It was too deep to saw, so we backed a little, holes were drilled in the ice, and several barrels of gunpowder blew a hole large enough for us to crush through.

So we sailed out into the sea, which was partially covered with melting and travelling bergs, and carefully steering past these into the open water, sailed away for good old England, having accomplished the most successful and important expedition of all time.

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