

CHAPTER 15

WE CONTINUE OUR DESCENT

At eight o'clock the next morning, a faint kind of dawn of day awoke us. The thousand and one prisms of the lava collected the light as it passed and brought it to us like a shower of sparks.

We were able with ease to see objects around us.

"Well, Harry, my boy," cried the delighted Professor, rubbing his hands together, "what say you now? Did you ever pass a more tranquil night in our house in the Konigstrasse? No deafening sounds of cart wheels, no cries of hawkers, no bad language from boatmen or watermen!"

"Well, Uncle, we are quite at the bottom of this well--but to me there is something terrible in this calm."

"Why," said the Professor hotly, "one would say you were already beginning to be afraid. How will you get on presently? Do you know, that as yet, we have not penetrated one inch into the bowels of the earth."

"What can you mean, sir?" was my bewildered and astonished reply.

"I mean to say that we have only just reached the soil of the island

itself. This long vertical tube, which ends at the bottom of the crater of Sneffels, ceases here just about on a level with the sea."

"Are you sure, sir?"

"Quite sure. Consult the barometer."

It was quite true that the mercury, after rising gradually in the instrument, as long as our descent was taking place, had stopped precisely at twenty-nine degrees.

"You perceive," said the Professor, "we have as yet only to endure the pressure of air. I am curious to replace the barometer by the manometer."

The barometer, in fact, was about to become useless--as soon as the weight of the air was greater than what was calculated as above the level of the ocean.

"But," said I, "is it not very much to be feared that this ever-increasing pressure may not in the end turn out very painful and inconvenient?"

"No," said he. "We shall descend very slowly, and our lungs will be gradually accustomed to breathe compressed air. It is well known that aeronauts have gone so high as to be nearly without air at all--why,

then, should we not accustom ourselves to breathe when we have, say, a little too much of it? For myself, I am certain I shall prefer it. Let us not lose a moment. Where is the packet which preceded us in our descent?"

I smilingly pointed it out to my uncle. Hans had not seen it, and believed it caught somewhere above us: "Huppe" as he phrased it.

"Now," said my uncle, "let us breakfast, and break fast like people who have a long day's work before them."

Biscuit and dried meat, washed down by some mouthfuls of water flavored with Schiedam, was the material of our luxurious meal.

As soon as it was finished, my uncle took from his pocket a notebook destined to be filled by memoranda of our travels. He had already placed his instruments in order, and this is what he wrote:

Monday, June 29th

Chronometer, 8h. 17m. morning.

Barometer, 29.6 inches.

Thermometer, 6 degrees [43 degrees Fahr.]

Direction, E.S.E.

This last observation referred to the obscure gallery, and was indicated to us by the compass.

"Now, Harry," cried the Professor, in an enthusiastic tone of voice, "we are truly about to take our first step into the Interior of the Earth; never before visited by man since the first creation of the world. You may consider, therefore, that at this precise moment our travels really commence."

As my uncle made this remark, he took in one hand the Ruhmkorff coil apparatus, which hung round his neck, and with the other he put the electric current into communication with the worm of the lantern. And a bright light at once illumined that dark and gloomy tunnel!

The effect was magical!

Hans, who carried the second apparatus, had it also put into operation. This ingenious application of electricity to practical purposes enabled us to move along by the light of an artificial day, amid even the flow of the most inflammable and combustible gases.

"Forward!" cried my uncle. Each took up his burden. Hans went first, my uncle followed, and I going third, we entered the somber gallery!

Just as we were about to engulf ourselves in this dismal passage, I lifted up my head, and through the tubelike shaft saw that Iceland sky I was never to see again!

Was it the last I should ever see of any sky?

The stream of lava flowing from the bowels of the earth in 1219 had forced itself a passage through the tunnel. It lined the whole of the inside with its thick and brilliant coating. The electric light added very greatly to the brilliancy of the effect.

The great difficulty of our journey now began. How were we to prevent ourselves from slipping down the steeply inclined plane? Happily some cracks, abrasures of the soil, and other irregularities, served the place of steps; and we descended slowly; allowing our heavy luggage to slip on before, at the end of a long cord.

But that which served as steps under our feet became in other places stalactites. The lava, very porous in certain places, took the form of little round blisters. Crystals of opaque quartz, adorned with limpid drops of natural glass suspended to the roof like lusters, seemed to take fire as we passed beneath them. One would have fancied that the genii of romance were illuminating their underground palaces to receive

the sons of men.

"Magnificent, glorious!" I cried in a moment of involuntary enthusiasm, "What a spectacle, Uncle! Do you not admire these variegated shades of lava, which run through a whole series of colors, from reddish brown to pale yellow--by the most insensible degrees? And these crystals, they appear like luminous globes."

"You are beginning to see the charms of travel, Master Harry," cried my uncle. "Wait a bit, until we advance farther. What we have as yet discovered is nothing--onwards, my boy, onwards!"

It would have been a far more correct and appropriate expression, had he said, "let us slide," for we were going down an inclined plane with perfect ease. The compass indicated that we were moving in a southeasterly direction. The flow of lava had never turned to the right or the left. It had the inflexibility of a straight line.

Nevertheless, to my surprise, we found no perceptible increase in heat. This proved the theories of Humphry Davy to be founded on truth, and more than once I found myself examining the thermometer in silent astonishment.

Two hours after our departure it only marked fifty-four degrees Fahrenheit. I had every reason to believe from this that our descent was far more horizontal than vertical. As for discovering the exact depth to

which we had attained, nothing could be easier. The Professor as he advanced measured the angles of deviation and inclination; but he kept the result of his observations to himself.

About eight o'clock in the evening, my uncle gave the signal for halting. Hans seated himself on the ground. The lamps were hung to fissures in the lava rock. We were now in a large cavern where air was not wanting. On the contrary, it abounded. What could be the cause of this--to what atmospheric agitation could be ascribed this draught? But this was a question which I did not care to discuss just then. Fatigue and hunger made me incapable of reasoning. An unceasing march of seven hours had not been kept up without great exhaustion. I was really and truly worn out; and delighted enough I was to hear the word Halt.

Hans laid out some provisions on a lump of lava, and we each supped with keen relish. One thing, however, caused us great uneasiness--our water reserve was already half exhausted. My uncle had full confidence in finding subterranean resources, but hitherto we had completely failed in so doing. I could not help calling my uncle's attention to the circumstance.

"And you are surprised at this total absence of springs?" he said.

"Doubtless--I am very uneasy on the point. We have certainly not enough water to last us five days."

"Be quite easy on that matter," continued my uncle. "I answer for it we shall find plenty of water--in fact, far more than we shall want."

"But when?"

"When we once get through this crust of lava. How can you expect springs to force their way through these solid stone walls?"

"But what is there to prove that this concrete mass of lava does not extend to the centre of the earth? I don't think we have as yet done much in a vertical way."

"What puts that into your head, my boy?" asked my uncle mildly.

"Well, it appears to me that if we had descended very far below the level of the sea--we should find it rather hotter than we have."

"According to your system," said my uncle; "but what does the thermometer say?"

"Scarcely fifteen degrees by Reaumur, which is only an increase of nine since our departure."

"Well, and what conclusion does that bring you to?" inquired the Professor.

"The deduction I draw from this is very simple. According to the most exact observations, the augmentation of the temperature of the interior of the earth is one degree for every hundred feet. But certain local causes may considerably modify this figure. Thus at Yakoust in Siberia, it has been remarked that the heat increases a degree every thirty-six feet. The difference evidently depends on the conductivity of certain rocks. In the neighborhood of an extinct volcano, it has been remarked that the elevation of temperature was only one degree in every five-and-twenty feet. Let us, then, go upon this calculation--which is the most favorable--and calculate."

"Calculate away, my boy."

"Nothing easier," said I, pulling out my notebook and pencil. "Nine times one hundred and twenty-five feet make a depth of eleven hundred and twenty-five feet."

"Archimedes could not have spoken more geometrically."

"Well?"

"Well, according to my observations, we are at least ten thousand feet below the level of the sea."

"Can it be possible?"

"Either my calculation is correct, or there is no truth in figures."

The calculations of the Professor were perfectly correct. We were already six thousand feet deeper down in the bowels of the earth than anyone had ever been before. The lowest known depth to which man had hitherto penetrated was in the mines of Kitzbuhel, in the Tirol, and those of Wurttemberg.

The temperature, which should have been eighty-one, was in this place only fifteen. This was a matter for serious consideration.