CHAPTER XVI

THE MAGNETIC POLE

Hatteras felt his anxiety increase as he neared the strait; the fate of his voyage depended upon it; up till now he had done more than his predecessors, the most fortunate of whom, McClintock, had taken fifteen months to reach this part of the Polar Seas; but it was little or nothing if he did not succeed in clearing Bellot Strait; he could not retrace his steps, and would be blocked up till the following year.

He trusted the care of examining the coast to no one but himself; he mounted the crow's nest and passed several hours there during the morning of Saturday. The crew perfectly understood the ship's position; profound silence reigned on board; the engine slackened steam, and the Forward kept as near land as possible; the coast bristled with icebergs, which the warmest summers do not melt; an experienced eye alone could distinguish an opening between them. Hatteras compared his maps with the land. As the sun showed himself for an instant towards noon, he caused Shandon and Wall to take a pretty exact observation, which was shouted to him. All the crew suffered the tortures of anxiety for half the day, but towards two o'clock these words were shouted from the top of the mizenmast:

"Veer to the west, all steam on."

The brig instantly obeyed; her prow was directed towards the point indicated; the sea foamed under the screws, and the Forward, with all speed on, entered between two ice-streams. The road was found, Hatteras descended upon deck, and the ice-master took his place.

"Well, captain," said the doctor, "we are in the famous strait at last."

"Yes," answered Hatteras, lowering his voice; "but getting in isn't everything; we must get out too," and so saying he regained his cabin.

"He's right," said the doctor; "we are here in a sort of mousetrap, with scarcely enough space for working the brig, and if we are forced to winter in the strait!... Well, we shan't be the first that have had to do it, and they got over it, and so shall we."

The doctor was not mistaken. It was in that very place, in a little sheltered harbour called Kennedy Harbour by McClintock himself, that the Fox wintered in 1858. The high granite chain and the steep cliffs of the two banks were clearly discernible.

Bellot Strait is seventeen miles long and a mile wide, and about six or seven fathoms deep. It lies between mountains whose height is estimated at 1,600 feet. It separates North Somerset from Boothia Land.

It is easy to understand that there is not much elbow-room for vessels in such a strait. The Forward advanced slowly, but it did advance; tempests are frequent in the strait, and the brig did not escape them; by Hatteras's order all sails were furled; but, notwithstanding all precautions, the brig was much knocked about; the waves dashed over her, and her smoke fled towards the east with astonishing rapidity; her course was not certain amongst the moving ice; the barometer fell; it was difficult to stop on deck, and most of the men stayed below to avoid useless suffering.

Hatteras, Johnson, and Shandon remained on the poop in spite of the gales of snow and rain; as usual the doctor had asked himself what would be the most disagreeable thing he could do, and answered himself by going on deck at once; it was impossible to hear and difficult to see one another, so that he kept his reflections to himself. Hatteras tried to see through the fog; he calculated that they would be at the mouth of the strait at six o'clock, but when the time came all issue seemed closed up; he was obliged to wait and anchor the brig to an iceberg; but he stopped under pressure all night.

The weather was frightful. The Forward threatened to break her chains at every instant; it was feared that the iceberg to which they were anchored, torn away at its base under the violent west wind, would float away with the brig. The officers were constantly on the look-out and under extreme apprehension; along with the snow there fell a perfect hail of ice torn off from the surface of the icebergs by the strength of the wind; it was like a shower of arrows bristling

in the atmosphere. The temperature rose singularly during this terrible night; the thermometer marked fifty-seven degrees, and the doctor, to his great astonishment, thought he saw flashes of lightning in the south, followed by the roar of far-off thunder that seemed to corroborate the testimony of the whaler Scoresby, who observed a similar phenomenon above the sixty-fifth parallel. Captain Parry was also witness to a similar meteorological wonder in 1821.

Towards five o'clock in the morning the weather changed with astonishing rapidity; the temperature went down to freezing point, the wind turned north, and became calmer. The western opening to the strait was in sight, but entirely obstructed. Hatteras looked eagerly at the coast, asking himself if the passage really existed. However, the brig got under way, and glided slowly amongst the ice-streams, whilst the icebergs pressed noisily against her planks, the packs at that epoch were still from six to seven feet thick; they were obliged carefully to avoid their pressure, for if the brig had resisted them she would have run the risk of being lifted up and turned over on her side. At noon, for the first time, they could admire a magnificent solar phenomenon, a halo with two parhelia; the doctor observed it, and took its exact dimensions; the exterior bow was only visible over an extent of thirty degrees on each side of its horizontal diameter; the two images of the sun were remarkably clear; the colours of the luminous bows proceeded from inside to outside, and were red, yellow, green, and very light blue--in short, white light without any assignable exterior limit. The doctor remembered the ingenious theory of Thomas Young about these meteors; this natural philosopher

supposed that certain clouds composed of prisms of ice are suspended in the atmosphere; the rays of the sun that fall on the prisms are decomposed at angles of sixty and ninety degrees. Halos cannot, therefore, exist in a calm atmosphere. The doctor thought this theory very probable. Sailors accustomed to the boreal seas generally consider this phenomenon as the precursor of abundant snow. If their observation was just, the position of the Forward became very difficult. Hatteras, therefore, resolved to go on fast; during the remainder of the day and following night he did not take a minute's rest, sweeping the horizon with his telescope, taking advantage of the least opening, and losing no occasion of getting out of the strait.

But in the morning he was obliged to stop before the insuperable ice-bank. The doctor joined him on the poop. Hatteras went with him apart where they could talk without fear of being overheard.

"We are in for it," began Hatteras; "it is impossible to go any further."

"Is there no means of getting out?" asked the doctor.

"None. All the powder in the Forward would not make us gain half a mile!"

"What shall we do, then?" said the doctor.

"I don't know. This cursed year has been unfavourable from the

beginning."

"Well," answered the doctor, "if we must winter here, we must. One place is as good as another."

"But," said Hatteras, lowering his voice, "we must not winter here, especially in the month of June. Wintering is full of physical and moral danger. The crew would be unmanageable during a long inaction in the midst of real suffering. I thought I should be able to stop much nearer the Pole than this!"

"Luck would have it so, or Baffin's Bay wouldn't have been closed."

"It was open enough for that American!" cried Hatteras in a rage.

"Come, Hatteras," said the doctor, interrupting him on purpose, "to-day is only the 5th of June; don't despair; a passage may suddenly open up before us; you know that the ice has a tendency to break up into several blocks, even in the calmest weather, as if a force of repulsion acted upon the different parts of it; we may find the sea free at any minute."

"If that minute comes we shall take advantage of it. It is quite possible that, once out of Bellot Strait, we shall be able to go north by Peel Strait or McClintock Channel, and then----"

"Captain," said James Wall, who had come up while Hatteras was

speaking, "the ice nearly carries off our rudder."

"Well," answered Hatteras, "we must risk it. We must be ready day and night. You must do all you can to protect it, Mr. Wall, but I can't have it removed."

"But----" added Wall.

"That is my business," said Hatteras severely, and Wall went back to his post.

"I would give five years of my life," said Hatteras, in a rage, "to be up north. I know no more dangerous passage. To add to the difficulty, the compass is no guide at this distance from the magnetic pole: the needle is constantly shifting its direction."

"I acknowledge," answered the doctor, "that navigation is difficult, but we knew what we had to expect when we began our enterprise, and we ought not to be surprised at it."

"Ah, doctor, my crew is no longer what it was; the officers are spoiling the men. I could make them do what I want by offering them a pecuniary reward, but I am not seconded by my officers, but they shall pay dearly for it!"

"You are exaggerating, Hatteras."

"No, I am not. Do you think the crew is sorry for the obstacles that I meet with? On the contrary, they hope they will make me abandon my projects. They do not complain now, and they won't as long as the Forward is making for the south. The fools! They think they are getting nearer England! But once let me go north and you'll see how they'll change! I swear, though, that no living being will make me deviate from my line of conduct. Only let me find a passage, that's all!"

One of the captain's wishes was fulfilled soon enough. There was a sudden change during the evening; under some influence of the wind, the current, or the temperature, the ice-fields were separated; the Forward went along boldly, breaking up the ice with her steel prow; she sailed along all night, and the next morning about six cleared Bellot Strait. But that was all; the northern passage was completely obstructed--to the great disgust of Hatteras. However, he had sufficient strength of character to hide his disappointment, and as if the only passage open was the one he preferred, he let the Forward sail down Franklin Strait again; not being able to get up Peel Strait, he resolved to go round Prince of Wales's Land to get into McClintock Channel. But he felt he could not deceive Shandon and Wall as to the extent of his disappointment. The day of the 6th of June was uneventful; the sky was full of snow, and the prognostics of the halo were fulfilled.

During thirty-six hours the Forward followed the windings of Boothia Land, unable to approach Prince of Wales's Land; the captain

counted upon getting supplies at Beechey Island; he arrived on the Thursday at the extremity of Franklin Strait, where he again found the road to the north blocked up. It was enough to make him despair; he could not even retrace his steps; the icebergs pushed him onwards, and he saw the passages close up behind him as if there never had existed open sea where he had passed an hour before. The Forward was, therefore, not only prevented from going northwards, but could not stop still an instant for fear of being caught, and she fled before the ice as a ship flies before a storm.

On Friday, the 8th of June, they arrived near the shore of Boothia, at the entrance to James Ross Strait, which they were obliged to avoid, as its only issue is on the west, near the American coasts.

Observations taken at noon from this point gave 70 degrees 5 minutes 17 seconds latitude, and 96 degrees 46 minutes 45 seconds longitude; when the doctor heard that he consulted his map, and saw they were at the magnetic pole, at the very place where James Ross, the nephew of Sir John, had fixed it. The land was low near the coast, and at about a mile's distance became slightly elevated, sixty feet only. The Forward's boiler wanted cleaning, and the captain caused the brig to be anchored to an ice-field, and allowed the doctor and the boatswain to land. He himself cared for nothing but his pet project, and stayed in his cabin, consulting his map of the Pole.

The doctor and his companion easily succeeded in reaching land; the doctor took a compass to make experiments with. He wished to try if

James Ross's conclusions hold good. He easily discovered the limestone heap raised by Ross; he ran to it; an opening allowed him to see, in the interior, the tin case in which James Ross had placed the official report of his discoveries. No living being seemed to have visited this desolate coast for the last thirty years. In this spot a loadstone needle, suspended as delicately as possible, immediately moved into an almost vertical position under the magnetic influence; if the centre of attraction was not immediately under the needle, it could only be at a trifling distance. The doctor made the experiment carefully, and found that the imperfect instruments of James Ross had given his vertical needle an inclination of 89 degrees 59 minutes, making the real magnetic point at a minute's distance from the spot, but that his own at a little distance gave him an inclination of 90 degrees.

"Here is the exact spot of the world's magnetic pole," said the doctor, rapping the earth.

"Then," said the boatswain, "there's no loadstone mountain, after all."

"Of course not; that mountain was only a credulous hypothesis. As you see, there isn't the least mountain capable of attracting ships, of attracting their iron anchor after anchor and nail after nail, and you see it respects your shoes as much as any other land on the globe."

"Then how do you explain----"

"Nothing is explained, Johnson; we don't know enough for that yet. But it is certain, exact, mathematical, that the magnetic pole is in this very spot!"

"Ah, Mr. Clawbonny! how happy the captain would be to say as much of the boreal pole!"

"He will some day, Johnson, you will see."

"I hope he will," answered the boatswain.

He and the doctor elevated a cairn on the exact spot where the experiment had been made, and returned on board at five o'clock in the evening.