

jumping down from the box. "The right un's in that cab, and we're done if we can't catch it up."

With that they bolted off after the rapidly-vanishing hansom; while the driver of the Victoria, still thinking of the pound to be won, rattled off in the opposite direction.

In Moorgate Street, Eric stopped the carriage, paid the servants, and taking the portmanteau, told the driver to return to St. John's Wood. In the waiting room of the riding school he found Nessa.

"Where is my friend?" she asked, anxiously, seeing him alone.

"She has escaped; but she thought it better not to come here," Eric replied with a delicate consideration for the girl's feeling towards Mrs. Redmond which led him to conceal the woman's selfish motive. "She will telegraph to you here when she has found a secure place where you may join her."

"She feared they might follow her here and find me. For if any one is guilty it must be I who incurred all those dreadful debts, you know."

She spoke in a tone of earnest persuasion, wishing to disabuse this new friend's mind of the prejudice which he and his family obviously entertained against Mrs. Redmond.

"I hope that no one is more guilty than you," Eric replied, fervently. "Yes; I wish that with my heart for your sake. There is a dress in this valise for you; you may have to make a journey, and it would be impossible in that riding habit."

"Oh, how thoughtful of her!" exclaimed Nessa; "any one but a true friend would have been concerned only about her own safety at such a time."

"A true friend cannot ever forget," he said, with a touch of sadness, not attempting to disabuse her mind and show that it was he and not Mrs. Redmond who had thought of the details."

Nessa called an attendant to take the portmanteau into the ladies' dressing room, and then turning to Eric, she said—

"I want to thank you for all you have done, but I can find no words that are half nice enough just now. Perhaps I may while I am dressing," she added, archly; "will you wait here till I come back?"

"I shall not go away until I must go." When she was gone from the room, Eric sat with his face buried in his hands, seeing her face as one sees with closed eyes something of light that has fixed itself upon the retina.

A clerk came into the room and apologized.

"I beg your pardon, sir—I thought Miss Graham was here," he said.

He had an open paper in his hand. Eric rose—

"You have a telegram for Miss Graham," he said.

"No; the wire is addressed to us, but—" he hesitated a moment, "perhaps you can tell us something about it."

He gave the telegram to Eric to read.

"A gentleman will come to you with the Victoria and cab. Do not on any account let the carriage go. I will wire further instructions."

The office from which the telegram came was Victoria; there was not a word about Nessa. Eric's heart bounded with a secret hope.

"The ostler says he saw you get out of the Victoria at the corner of the street," said the clerk.

"Yes; it has gone back to St. John's Wood."

The clerk took back the telegram with a shrug and thanked Eric.

"There is no telegram for Miss Graham?" Eric asked.

"None, sir. If any should come I will bring it in at once."

Nessa came down, charming in her furs. The admiration in Eric's face told her that, if her glass had failed to do so.

"No message has come for me yet?" she said, interrogatively.

"None."

"It is stupid to expect one until she has an address to send me. I may have to wait three or four hours." She paused, and then, added, her pretty eyes twinkling, "I am afraid I cannot thank you as I should yet awhile."

"When you find words to thank me I may find words to bid you farewell—not before." That is just what she wanted him to say, and he said it as nicely as she could wish.

"We will leave both till the last moment possible. I shall be glad to put it off for quite a long while, for there are many questions that I wish to ask you, and—and I usually have lunch about this time."

Eric carried her off to an hotel, and they ate and drank together. Nessa showing a very pretty taste in her selection of dishes and wines, and they laughed and were happy, though each had black eyes close at hand. Nessa wished to make herself agreeable as

the only way in which she could express her gratitude, while Eric abandoned himself to the delight of the moment, and put away all gloomy thoughts for the gloomy hour that must come with a practical philosophy only possible to the young. An elderly stockbroker with a gouty too looked at them and said to himself, "They don't know yet what trouble it is." But there was another factor in Eric's happiness beyond Nessa's eyes and Nessa's voice and the charms that made up her delightful personality. Radford, clerk, in recommending the hotel at which they dined, had promised that if any telegram for Nessa came in during their absence, he would send it on by a messenger at once. Nearly two hours had passed since they left the riding school and no messenger had come. Every minute added to the probability that Nessa would be compelled to accept his father's offer.

(TO BE CONTINUED.)

He Was Frightened.

"Was I ever afraid in battle?" said an English army officer. "Many times. But there are different kinds of fright. I have served in India, in Egypt and in Western Africa, but the worst 'funk' I was ever in was when there was no enemy within thousands of miles of me."

"I was a captain at the time and was stationed at Fort Royal, Jamaica. We had just got a lot of recruits on our hands, the rawest, greenest recruits you ever saw. I was drilling them in rifle practice at long range, and had great trouble to make them obey orders with precision. In fact, one could never be sure whether they would fire when you wanted them to present or present when you wanted them to fire."

"I had been sending them through a practice one afternoon and they were so terribly stupid that I got into a vile humor. The day was fearfully warm and the sun beat down so fiercely that my horse, wicked brute, got into an almost ungovernable temper. I sat on my horse at the right of the squad and was giving them volley practice at long range. When my patience was entirely gone the men seemed to gain a little sense and began to fire with rapidity and accuracy. Things were running as smoothly as clockwork and I was soon soothed into cheerfulness despite the heat. Not so my horse. He was never more vicious."

"We were getting along so well by this time that it was 'Ready! Present! Fire!' and the volley would ring out like a single report."

"Once I cried out 'Ready!' and the work was as pretty as that of veterans."

"Present," and rifle went up to shoulder in perfect form. At the very instant I was about to say 'Fire!' my fretting horse bolted, cutting directly across the range. I was not twenty feet from the squad. My eye caught the glittering rifles leveled right at me and instinctively I closed my eyes and ducked my head. If you know what British soldiers are you can imagine my feelings, my terrible fear, for as I said before, I was never before in such a 'funk.' I knew that if I opened my mouth these recruits would riddle my body with rifle balls, for they were expecting the word 'Fire!' and probably would have taken any sound for that. My desire to cry out 'As you were!' to get the rifles off my body was so great that I had to clench my teeth to keep from crying out. Of course the whole thing took only a few seconds, but it was many minutes longer than that to me."

"When my plunging horse had carried me from before the motionless rifles I managed to wheedle him. As he came around I cried 'fire!' and every one of those stolid men obeyed the command with absolute precision. That assured me all the more that had I opened my mouth while crossing their range I should have been a dead man, for they were not drilled sufficiently to distinguish a different order at the last instant and yet followed one's words with a blind fidelity."

"I have often thought," added the officer, with a strange smile on his lips, "that those recruits fancied I had cut across them to test their drill, for they showed no surprise, not the faintest sign of emotion, when I suddenly wheeled and cried 'fire!' But you may well believe that this was not the case. And I pledge you that never afterward in rifle practice did I get caught in so dangerous and helpless a situation."

The Size of Royal Heads.

The Prince of Wales wears bell shaped silk hats. He pays 25 shillings each for them. He has a remarkably even-shaped head, the haters say, and his size is 7½. Prince Albert Victor only takes 6½.

The brims of his hats are enormously arched, to take off the effect of his long face. His brother Prince George, takes a 6½. The Emperor of Germany, who has a very uneven head, takes a 6½. So does the duke of Teck.

THE WONDERS ABOVE US.

Ice Fields on the Planet Mars.

New Discoveries of Great Interest.

Everybody must have noticed how Mars adorns the sky in these summer evenings. The beautiful planet, in which so high a degree of interest has been awakened by Schiaparelli's wonderful discoveries, can be seen just in the south between 9 and 10 o'clock. It appears in the constellation Scorpio, sometimes of a rich yellow or orange color, and sometimes decidedly red. The various conditions of the atmosphere and the difference in the eyes of observers all have their part in determining the description of its color. Not far away among the stars that are now grouped about the planet of war is Antares, one of the first magnitude, whose name some think was given to it on account of its resemblance to Mars in color. To most eyes Antares will probably appear of a deeper and livelier red than Mars. It is interesting to observe how completely the planet eclipses in splendor so bright a star as Antares. It may also interest the reader to know that while the distance of Mars from the earth is now some fifty millions of miles, that of Antares is so great that astronomers have not succeeded in measuring it. They are only able to say that it cannot be less than fifty million times as far away as Mars is. There is nothing more certain than that if that red star which appears so faint by comparison with the ruddy planet, were suddenly brought up to the place that Mars occupies, night would vanish in an

INCOMPARABLY GRANDER

sunrise than this terrestrial ball has ever witnessed. In truth, it is more than probable that in the fiery blaze of the monster sun, thus brought so near, all living things would be destroyed upon the earth. The oceans would boil away in vapor, and the very ground would smoke. Yet at its actual distance Antares appears to us to pale in the presence of the reflected light of a planet much smaller than the earth.

Some highly interesting and significant results have recently been obtained by photographing Mars. A series of photographs made in April by Mr. Wilson, and briefly described by Prof. Pickering in the *Sidereal Messenger*, suggest a possibility that the southern temperate regions of Mars have just experienced an eruption of polar ice no less remarkable than that which still adds the zest of danger to the navigation of our own North Atlantic. That our readers may know just what the observed phenomena are, we reproduce Prof. Pickering's description of the photographs:

"Seven views were taken April 9, between 22h. 56m. and 23h. 11m., Greenwich mean time. Seven more were taken April 10, between 23h. 20m. and 23h. 32m. Thus the same face of the planet was presented in both cases. Distinct and identifiable spots and markings are well shown in all the pictures, but in those taken on the latter date a considerable accession is shown to the white spot surrounding the south pole. It has been known for years that the size of these polar spots varied gradually from time to time, apparently diminishing in the summer and increasing in the winter of their respective hemispheres. But I believe that this is the first time that the precise date and approximate extent of one of these accessions has been observed. The area affected stretches from the terminator, which at this time was in longitude 70°, along parallel—30° to longitude 110°, thence to longitude 145°, latitude -45°; thence to the limb, which was in latitude -85°, and the 120° meridian, and thence back to the point of starting. It may thus extend also over an unknown area on what was at the time

THE INVISIBLE HEMISPHERE

of the planet. The visible area included is surprisingly large, amounting to about 2,500,000 square miles, or somewhat less than the area of the United States. Being near the limb, however, it is not as conspicuous as might at first sight be supposed.

"On the morning of April 9 the area was faintly marked out as if pervaded by haze, or by small separated bodies, too small and far apart, or too faint, to be recognized individually. But on April 10 the whole region was brilliant, fully equalling that surrounding the north pole. In the mean time a much smaller area on the limb, which on the 9th was very bright, had either vanished or joined the main mass by moving warily, considering Mars as a globe."

"This date of these events is the end of the winter season of the hemisphere of Mars which is now visible."

are that these appearances are conspicuous upon each of the fourteen photographs, and so distinctly so that no one who had once seen them would hesitate an instant in deciding on which day any particular plate was taken."

It is quite clear that the appearances presented in the photographs as described by Prof. Pickering might be produced by the drifting of vast ice fields from the southern polar regions of Mars in the direction of the equator. It seems practically impossible, however, that the drifting ice could cover so immense an area in the course of a single day, and a little reflection shows that it is not necessary to assume so rapid a spread of the ice. It will be observed that, as shown by the photograph taken on April 9, the region in question presented a hazy or perhaps mottled appearance. The next day this had all changed to a brilliant white. The phenomenon of the first day may not improbably have been due to

THE PRESENCE OF ICE FIELDS

of great extent that had gradually accumulated under the influence of polar currents resembling the Labrador current that brings down our icebergs. The fogs and mists that commonly hang over large fields of ice that have drifted into warmer latitudes would assist in producing the hazy appearance recorded by the photograph. Then an inflow of warm moist air from the southward over the ice fields would suffice to account for the sudden blanching of the whole region the next day through the formation of a vast sheet of cloud, such as not infrequently, under somewhat similar circumstances, covers extensive areas on the earth. It is well known that the upper surfaces of clouds reflect the sunshine as brilliantly as now-fallen snow. It is a pity that photographs were not taken for several days in succession, in order that it might have been determined whether the white area underwent such changes as would indicate that clouds were a principal cause of the phenomenon.

On looking at a map of Mars it will be seen that such a waterway as would be needed to convey vast quantities of ice from the south polar region into temperate latitudes exists on that planet just at the place where the strange phenomena described were observed. The drifting ice, if such there was, must have covered the larger part of what has been called the De Cottignez Sea, and extending thence toward the equator, passed through a broad strait into the southern end of the De La Rue Ocean.

Unfortunately, no photographs were taken showing the condition of things on the other side of the planet, but it is probable that a similar extension of the ice and cloud region occurred there also. There are four principal straits connecting the southern polar sea of Mars with the equatorial oceans; first,

THE BROAD WATERWAY

already mentioned, and then the Zollner Sea, the Newton Sea, and the Lambert Sea. By any of these passages, it would appear, the polar ice floes could make their way toward the equator.

If it could be proved that Mars has really just experienced an extraordinary visitation of ice in its oceans, the fact would not be without its weight in determining the question of extra-terrestrial influences in meteorology. The truth is, we are just beginning to discover the points of resemblance as well as of divergence among the various members of the solar system, and the many ways in which they are linked together. The planets can never again be regarded, as they have sometimes been, as mere globes of matter, furnishing by their motions beautiful practical problems for the mathematician, but possessing in themselves no closer interest for us. In place of the strange dreams of Swedenborg, the stately imaginings of Dr. Chalmers, or the fanciful notions of Fourier and Huygens, about the inhabitants of other planets, we are getting from our day views of the actual condition of things on the surfaces of those globes which, puzzling as they often appear, nevertheless give us a substantial basis for our opinions as to their probable inhabitants. Man's eyes are no longer to be dazzled by the mere discovery of new worlds, but by the discovery of the conditions of life on them."

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