

town of Ismaïlia, the half-way stopping place for travellers on the Canal. Here anchored the flotilla during the progress of the opening, and the dark-skinned children of the Prophet were seen mingled with throngs of fair-complexioned Giaours in friendly rejoicings.

Ismaïlia is an important place, for it is the pumping-station of the fresh-water canal which was first made in order to supply the thousands of labourers with drink, and water for their works. On this pumping-station all the country between Lake Timsah and Port Saïd depends for it supplies the precious element.

The hollow of the Bitter Lakes, six miles wide in the widest part, is believed to have been at one time connected with the Red Sea. The level of the water in these lakes has been brought up to that of the sea by a re-opening of the connection. In March of the present year, all preparations being complete, the water was admitted, and a great stream, pouring in from the Mediterranean and from the Red Sea, gradually rose upon the arid saline slopes of the deep and desolate basin. For some weeks the flow went on, until, as was estimated, two thousand million cubic metres of water had flowed in, and the level was established. The area of the lakes will be largely increased by this contribution from the two seas; and it will be interesting to watch whether in connection with the two canals—the salt-water and fresh-water—any modification of the climate of the Isthmus may be produced. Much has been said, too, about the loss that will take place by evaporation under the sun of Egypt: the amount is so great as to be almost incredible. This loss will have to be provided for; as also the effect of blowing sands, which will accelerate the tendency of the bottom to grow towards the surface, always observable in canals.

Up to the last moment predictions from various quarters have been heard that no big ships would ever effect the passage of the canal. But while we write these lines, telegrams from the East inform us that *L'Aigle*, the French yacht, with her Majesty the Empress on board, had got through, and was anchored in the Red Sea. From the same source we learn that the Peninsular and Oriental steamer *Delta*, drawing 15½ feet of water, had arrived at Ismaïlia from Port Saïd, but had touched ground a few times on the way. The Egyptian vessel *Lattif* attempted the passage, but for want of sufficient depth had to return; difficulties occurred with other vessels, and the banks of the Canal were much damaged.

But the Khédive has invested M. de Lesseps with the Grand Cross of the Order of the Osmanli, and the Emperor Napoleon has appointed him to the rank of Grand Cross of the Legion of Honour. We may therefore hope for the best in all that appertains to the Suez Canal, and that foreigners will believe that Englishmen are too ready to admire good work to feel jealous of the energetic hearts by whom it has been accomplished.

LETTERS TO THE EDITOR

[The Editor does not hold himself responsible for opinions expressed by his Correspondents.]

The Meteor of November 6th

METEORS being in season just now, all facts respecting them will, I presume, be acceptable. The public have lately been treated to a great number of letters in newspapers descriptive of the remarkable meteor of Saturday, November 6th—perhaps I should rather say *a* instead of *the* remarkable meteor, because, from the discrepancies as to the time of the appearance and the differences in the description, I am inclined to believe that more than one meteor of unusual splendour was seen on that evening. I need hardly say how important it is to have observations of the visual direction of these bodies as viewed from stations widely separated from each other, because it is only observations of this kind which can afford data for judging of the distance of a meteor. In the hope of contributing information which may assist in clearing up this interesting question, I venture to add another letter to the many which have already appeared.

At five minutes before seven on Saturday evening, November 6th, while walking with my back towards the south, near the village of Rothbury in Northumberland, I was startled by a brilliant light behind me, and on turning I saw a magnificent meteor descending from the eastward at an angle of about 45° to the southern horizon. Its colour was a bluish-white, and it left a train which looked exactly like that of a large rocket, but which did not remain visible to my view for more than about fifteen seconds. The meteor did not appear to me to burst, although pieces seemed to separate from it before it expired. At the moment of extinction it was about 12° or 14° above the horizon, and its direction was then S.S.W. I am quite sure as to the time of the occurrence to within a minute, because, although I could not see to read my watch at the moment—a chronometer on which I can depend, and which I know was right—I hastened to the nearest light, about four hundred yards distant, where I ascertained that the time was one minute to seven, which, allowing about four minutes for walking the four hundred yards, would make the time of the appearance five minutes to seven. So far as I have seen, there is but one describer of this meteor whose record of the time exactly agrees with mine, and as it is incredible that two such unusual meteors should occur in the same minute, it is almost absolutely certain that he and I saw the same. My co-observer was the writer of a letter in the *Times*, signed J. A. Cayley, dated from the neighbourhood of Bristol, where he witnessed the phenomenon at a distance of two hundred and sixty miles from where I saw it in Northumberland. As viewed by him, it appeared to descend from the zenith to about 20° above the western horizon, while I, as already stated, saw it in the south. His description of the meteor differs from mine only in regard to the train, which is described as continuing visible to him for fifteen minutes, a difference which may be attributed to its being nearer and more overhead to him than to me.

I will not hazard even an approximate calculation of distance from the data I have given, but I confess my inability to reconcile the different angles under which this object was seen at opposite ends of a base-line having Bristol at one end and Rothbury at the other, with the supposition that its height did not exceed that which is ordinarily assigned to the atmosphere. At all events, if the atmosphere exists at the height of this meteor, it will be more attenuated than in the exhausted receiver of the most perfect air-pump, and it is difficult to conceive how air so rarefied can so oppose the flight of a solid body as to produce the intense ignition exhibited in a meteor. Yet it seems impossible to attribute the incandescence of these bodies to any other cause than the resistance opposed by the atmosphere to their prodigious velocity.

W. G. ARMSTRONG

Newcastle-on-Tyne, Nov. 22, 1869

Lectures to Ladies

No one can appreciate more heartily than I do the excellent article on "Lectures to Ladies" which appeared in *NATURE* No. II.; but I feel far from sanguine of success attending the efforts there referred to. If we put aside the impulse of dilettantism and the spirit of rivalry as against men, there will, let us hope, be left a very fair residue in the shape of love of learning, for learning's sake, as a reason for attendance; and it is only this pure love of learning which can make such lectures in the long run successful. It cannot, however, be such a love which brings to the lectures of the University College Professors, Lady Barbara, who sneers aloud when the lecturer wisely lays a sure foundation of elementary facts and ideas; or which carries to South Kensington the Hon. Miss Henrietta, who tosses her head when she finds the great Mr. Huxley paddling about in that common river the Thames, and treating his audience as if they were little girls at the Finsbury Institution.

I very much fear that the Lady Barbaras of the present generation are beyond redemption, and that many earnest men are wasting their strength in trying to win the minds of intellectual coquettes.

There is an order of women, however, having in their number, as I know full well, some of the brightest and best of the women of England, to whom such lectures would be as manna in the wilderness. To women struggling, as many of us are, to get their daily bread by the hard task of teaching, and in the struggle getting glimpses of the sweetness and the light of real knowledge, the chance of listening to real teachers would be an inestimable boon. These are the women to whom, it must be remembered,