

The importance of the first was forced upon me in 1871, when Captain Bailey, who travelled 400 miles to our camp to help us, and volunteered to act as timekeeper, turned his back resolutely on the eclipse and saw absolutely nothing of it, because in the preliminary drills he found he had a difficulty in picking up the time again when once he looked away from the face of his chronometer.

This time then we have a relay of timekeepers, one replacing the other at "60 seconds more"; this signal is given by both. The one who gives the time has his back to the sun, the other will see what he can. At my signal, "Go," depending upon the final disappearance of the photosphere as seen in a $3\frac{3}{4}$ with neutral tinted glass, the timekeeper first on duty is to sing out "105 seconds" and give the time every 5 seconds, "100 seconds," "95 seconds more," and so on.

The question of lamps during the eclipse is settled in the following way. If the sky be quite clear, some will certainly be wanted for the timekeepers in the huts, and for reading the fine graduations of the delicate chemical thermometers which I have brought with me. But if the sky be not clear, then others may be wanted too. So Captain King Hall has arranged to have ten lamps, each in charge of a bluejacket, in reserve, in the middle of the camp, so that anybody who wants one has only to say so to be immediately supplied.

A guard of five marines has remained permanently at the camp during our stay. They are generally dressed in most arctic-looking costumes known as "lammy suits." These are nothing more than a pair of trousers and jacket (with a hood), made out of ship's blankets, worn over the ordinary dress; they were invented, I believe, by the sailors when they made a long stay at Spitzbergen. They seem to be grand clothes for a camp, and in fact one of the marines seems to be seldom out of his—he appears to revel in the warmth it gives. Besides acting as guard to the camp, the marines are useful in many other respects; for instance, in addition to signalling for us, they are very good cooks, and all our cocoa, soups, meat, &c., brought from the ship, only needs to be handed over to them to be served up in our tent in a very appetising condition.

Since the eclipse begins so early on the morrow, arrangements have been made that a few of us should sleep in the camp to-night, and thus come under their special care; the ship's company will come over in the morning.

J. NORMAN LOCKYER.

(To be continued.)

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PROFESSOR A. H. GREEN, F.R.S.

GEOLOGICAL science has sustained a very serious loss in the death of Alexander Henry Green, Professor of Geology in the University of Oxford. He was born at Maidstone on October 10, 1832, and after receiving his early education at the grammar school at Ashby-de-la-Zouch, he entered Gonville and Caius College, Cambridge. There he gained the place of sixth wrangler in 1855, and was elected a fellow of his college. Although mathematics had gained for him his high position in the University examination, yet geology had taken some hold of him. His interest in the subject had been awakened in Leicestershire, and the eloquent teachings of Sedgwick had further attracted him to the science.

In 1861 he obtained the appointment of Assistant Geologist on the Geological Survey of Great Britain, and was engaged for some years in mapping portions of the



FIG. 8.—Our Lapp Visitors.

midland counties, near Aylesbury, Buckingham, and to the east of Banbury. Three years later his memoir on the geology of the country around Banbury was published; and although since then some modifications have been made in the grouping of the oolites, his careful statement of facts rendered the work of permanent value. Leaving these regions of lias and oolites and glacial drifts, he was transferred to the carboniferous districts of Derbyshire and South Yorkshire. Here he laboured for a number of years, practically superintending the survey of the great coal-field, and training several junior geologists to assist in the work. In the end he produced, with the aid of his colleagues, the large and exhaustive memoir on the Yorkshire coal-field, published by the Geological Survey. In 1875 he resigned his post on this survey on being appointed Professor of Geology in the Yorkshire College at Leeds. Ultimately he became

also Professor of Mathematics at the same college. Although by no means a voluminous writer, he contributed occasional papers to the Geological Society and to the *Geological Magazine* on the carboniferous rocks of the north of England, on sub-aërial denudation, on the geology of Donegal, the Malvern Hills, &c. His practical knowledge of geology, his clear head, and sound judgment rendered his advice on matters of engineering geology of great service. Consequently he was engaged here and there in many important undertakings, more especially in reference to coal-mining, water-supply, &c. This work, perhaps unfortunately, was needful, for it exhausted those energies that might have been more advantageously directed to the advancement of knowledge. Professorships of geology are not, however, lavishly endowed. Visiting portions of South Africa in the course of practical work, he was able to obtain a considerable insight into the geology, and brought his results before the Geological Society. Not the least important of his labours was his manual of Physical Geology, admittedly the best English work on this branch of the science, and one which reached a third edition in 1882. The companion volume on Stratigraphical Geology was never completed, and indeed other publications perhaps rendered it unnecessary.

After the resignation of Prof. Prestwich in 1888, he was chosen to succeed him in the chair of Geology in the University of Oxford. Here he found abundance of work to do in the arrangement of the geological museum, in his lectures and class excursions. A large task, indeed, still remains to be done in the examination of many treasured specimens that have never yet been exhibited. Prof. Green took great interest in this work, and in the acquisition of new specimens. Only recently he spent some time in selecting a series of fossils from the valuable collection of the late Thomas Beesley, of Banbury, which had been presented to the Oxford Museum by Mrs. Beesley.

Prof. Green was elected a Fellow of the Royal Society in 1886, and he served on the Council during the years 1894-95. For many years he gave lectures on geology at the Military School at Chatham; he was an examiner in geology for the University of London; and had been President of the Geological Section of the British Association at Leeds in 1890.

Early in August he was afflicted with a stroke of paralysis, and a second attack terminated his busy and useful life on the 19th of the month. Eminently genial and kind-hearted, he will long be missed by his many friends.
H. B. W.

NOTES.

At the Leyden International Zoological Congress, held last year, it was decided that the next meeting of the kind should take place in England, in September 1898, and that Sir William Flower, Director of the British Museum (Natural History), should be its President. We now learn, through the *Times*, that it has been determined that the 1898 Congress, the fourth of the series, shall meet at Cambridge, under the auspices of the University, simultaneously with the International Physiological Congress, which has arranged to go there in that year. London and Edinburgh were named as places of meeting in connection with the Zoological Congress, but it was felt that there were certain advantages in holding an international meeting of this character in a University town within easy distance of London, rather than in London itself. The organising and reception Committee consists of Prof. Alfred Newton, President; Mr. Adam Sedgwick, Vice-President; Messrs. J. W. Clarke and Sydney J. Hickson, Treasurers; and Messrs. S. F. Harmer and Arthur E. Shipley, Secretaries. With reference to the two prizes which will be awarded at the

Congress for the best zoological papers, the Paris members of the permanent Committee suggest that the subject for the Tsar Alexander III. prize, which will be given for the first time, shall be "The Study of the Ruminant Mammalia of Central Asia, from a Zoological and Geographical Standpoint"; and that for the Tsar Nicholas II. prize, which was awarded last year at Leyden for the first time, the paper shall be "An Anatomical and Zoological Monograph of a Group of Marine Invertebrates." These subjects are, however, in the nature of proposals which may be modified, since the Paris Committee will be glad to receive counter-suggestions and to learn the views of zoologists before making public the detailed programme of the prizes.

THE annual conference of the Iron and Steel Institute opened at Bilbao on Tuesday, under the presidency of Sir David Dale. Various papers were read, and in the evening a grand reception was given by the municipal authorities in honour of the Institute.

INFORMATION has been received through Reuter's agency of the finding of an extensive gold-bearing quartz reef at Cape Broyle, Newfoundland. The analysis shows nearly three ounces of gold to the ton of quartz, and over one ounce of silver. The barrels of quartz sent for analysis were taken at random.

DR. E. S. HOLDEN announces in *Science* the following gifts to the Lick Observatory:—By Miss Caroline W. Bruce, of New York City, a sum of money to procure a large comet-seeker, and to provide photometers for visual use with the thirty-six-inch equatorial; by Mr. Walter W. Law, of Scarborough-on-Hudson, a liberal gift towards providing for the publication of the Observatory Atlas of the Moon, mentioned in the *Publications*, vol. viii. p. 187.

THE forty-first annual exhibition of the Royal Photographic Society is in course of preparation, and will be opened to the public on Monday, September 28. On Saturday, September 26, there will be a private view, followed in the evening by a *conversazione*, at which the President and Council will receive the fellows, members, and their friends. The judges this year in the technical section are Captain Abney and Messrs. Chapman Jones and Andrew Pringle. Exhibits must be delivered at the Society's rooms, at 12 Hanover Square, not later than the morning of September 10.

PARTICULARS of the International Horticultural Exhibition to be held in Hamburg, from May to September next, have now come to hand. The Committee proposes: (1) a Permanent Exhibition, out-of-doors and under cover, from the beginning of May 1897, to the end of September, 1897; (2) a Spring Exhibition, from May 1 until May 7, 1897; (3) a Special Exhibition of plants, flowers, and vegetables, from May 30 until June 3, 1897; (4) a Special Exhibition of plants, flowers, and shrubs, from July 2 until July 6, 1897; (5) a Special Exhibition of plants, flowers, and fruits of the season, from July 30 until August 3, 1897; (6) a general Autumn Exhibition from August 27 until September 5, 1897; (7) a general Fruit Exhibition, from September 17 until September 30, 1897.

THE seventh annual general meeting of the Federated Institution of Mining Engineers is announced to take place at Cardiff on September 15, 16, and 17. Some thirteen papers are on the agenda, and many excursions have been arranged. An invitation has been given to the Federated Institution, among others, by the Canadian Mining Institute, to hold a meeting in Montreal at about the date of the meeting of the British Association in Toronto next year; but before replying, the Secretary of the Institution is anxious to learn the names of those who may be expected to be present on the occasion.