

News and Views

Aurora of January 25-26

A BRILLIANT auroral display was visible over most of England and from many places on the continent of Europe on the night of January 25-26. Dr. B. A. Keen, president of the Royal Meteorological Society, has sent the following account of the spectacle: "At Harpenden, Herts, the display was seen from 6.45 p.m. until well after midnight. The early stages appeared as a red glow in the north-west and later in the north-east, with a low broad green arc in between. The area of the luminous sky increased, and by 8.30 p.m. the green colour with areas of red extended well south of Orion. Up to 11 p.m. there seemed to be three periods of brilliant display: the first, and perhaps the best, at 7.45 p.m. when a bright red glow in the north-north-east was traversed by many sharply defined green and white shafts; at 8.30 p.m. especially in the east; and again at 9.45 p.m. when diffuse and rapidly fluctuating green streamers appeared between north-east and north-west, directed towards the zenith. Thereafter, the luminosity decreased, but as late as 11 p.m. a broad green arc stretching from north-west to north-east was still clearly visible. About midnight, a fourth display began with red streamers in the north-west, which extended until a broad red band was formed passing through the zenith to the north-east. At 1 a.m. faint red and green glows were still visible.

The Recent Sunspot and Magnetic Storms

THE large sunspot reported on p. 156 of last week's issue was easily seen with the naked eye at about the time of central meridian passage on January 18. The maximum area of the spot was more than 3,000 millionths of the sun's hemisphere; the spot is, therefore, one of the largest half-dozen spots recorded at Greenwich since 1875. As already reported, a magnetic storm was recorded at Abinger, beginning on January 16, 22½ hr. A second and larger disturbance developed rapidly on January 22 after 5 hr.; between 9 hr. and 10 hr. a range of 56' in declination occurred, while that in horizontal force was 600γ. This range in H.F. had not been exceeded at Greenwich since the magnetic storm of May 17, 1921, but the maximum of the present period of disturbance had not been reached. On January 25 (a day after the big sunspot had disappeared over the western edge of the sun) a sudden commencement began at about noon and developed to a remarkable degree. The great aurora which followed is described above. A telephoned account of a preliminary examination of the Abinger magnetic traces stated that large movements of the recording magnets began at 17 hr. and were particularly marked between 20 hr. and 21½ hr.; the disturbance died down about 3 hr. on January 26. The total ranges during the disturbance were approximately 2.1° in declination,

1,000 γ in *H* and 550 γ in *V*. The storm is probably unequalled in the Greenwich records since that of September 25, 1909. As already stated, the big sunspot had passed off the disk on January 24 and there is no other unusual spot at present visible.

Dr. G. M. B. Dobson, F.R.S.

AT the annual general meeting of the Royal Meteorological Society held on January 19, the Symons Memorial Gold Medal awarded for distinguished work in connexion with meteorological science was presented to Dr. G. M. B. Dobson, reader in meteorology in the University of Oxford. Dr. Dobson's earlier researches related to atmospheric electricity and to the structure of the atmosphere as revealed by pilot balloon observations. In 1922, in a paper on the theory of meteors contributed to the Royal Society, Dr. Dobson, in collaboration with Prof. A. Lindemann, adduced the first reasoned evidence of the existence of high temperatures in the atmosphere above 50 km. Since 1923 he has extended most fruitfully the method of Fabry and Buisson for the study of the absorption of ultra-violet radiation in the upper atmosphere and thence the determination of the ozone content of the atmosphere. A photographic method of observation was developed and instruments were distributed to suitable observers in many countries. Later, a photo-electric method was devised to facilitate the routine measurement of atmospheric ozone. Observations made by collaborators in many parts of the world have established the nature of the variation of ozone content with season and latitude, and have revealed close relationships between the amount of ozone, the development of atmospheric pressure at sea-level and certain meteorological characteristics of the atmosphere. Further advances are to be hoped for from an extension of international co-operation in prospect.

Emmanuel Swedenborg (1688-1772)

TO-DAY world-wide celebrations are being held to commemorate the 250th anniversary of the birth of the great Swedish man of science and theologian, Emmanuel Swedenborg, who was born in Stockholm on January 29, 1688, and died in London on March 29, 1772. His death took place at 26 Great Bath Street, Clerkenwell, and he was buried in the Swedish Church, Princes Square, Stepney, whence, however, his remains were taken to Sweden in 1908. He was the second child and eldest son of Jasper Swedberg (1653-1735) a preacher, poet and visionary, who became bishop of Skara. From an early age young Swedberg, a name he bore until he was ennobled in 1719, showed unusual talent, and after studying at the University of Uppsala in 1710 came to England. He also visited France and Holland and in 1716, two years after returning home, published his "Daedalus

Hyperboreus", a kind of repository of contemporary inventions and experiments. In the same year Charles XII made him assessor in the College of Mines. His writings from that time onwards, published and unpublished, ranged over the whole field of science. In 1721 he wrote his "Prodromus Principiorum Rerum Naturalium", in 1722, a work on geology, in 1734 published in three volumes his "Opera Philosophica et Mineralia", in 1741 his "Economy of the Animal Kingdom" and in 1744-45 his "Animal Kingdom", with which his course as a natural philosopher ended. In London in 1749-56 he published his "Heavenly Arcana" and this was followed by some two score of theological works. He himself made no attempt to found a sect, but his followers established "the New Church signified by the New Jerusalem in the Revelation" and 'Swedenborgians' are to-day found all over the world.

THE removal of Swedenborg's body to Sweden in 1908 was but a part of a movement for the recognition of his genius as a man of science. In 1901 Dr. Max Neuberger, of Vienna, gave an address to an assembly of German naturalists and physicians entitled "Swedenborg's References to the Physiology of the Brain", in which he pointed out how Swedenborg had anticipated many modern discoveries. Dr. Neuberger next addressed a communication to the Academy of Sciences of Stockholm in which he expressed his regret that Swedenborg's manuscript on the brain had not been published. A committee was appointed to investigate the matter. On May 29, 1903, Prof. Gustaf Retzius, the president of the Academy, presented a report on the investigation to the Congress of Anatomists at Heidelberg. This led to a further examination of the manuscripts, and Dr. Retzius proposed that the Academy should issue an edition of Swedenborg's scientific and philosophical works. Even before this, proposals had been put forward for the founding of a museum for the preservation of portraits, relics and other Swedenborgiana. Emerson wrote of Swedenborg: "He had great modesty and gentleness of bearing. His habits were simple; he lived on bread, milk and vegetables; he lived in a house situated in a large garden. . . . He is described, when in London, as a man of a quiet, clerical habit, not averse to tea and coffee, and kind to children. He wore a sword when in full velvet dress, and whenever he walked out carried a gold-headed cane. There is a common portrait of him in antique coat and wig, but the face has a wandering or vacant air."

Scientific Delegation to India

OUR correspondent, writing from Bombay on January 15, says: Some sixty members of the scientific delegation to India, including the president, Sir James Jeans, embarked on the S.S. *Strathaird* at Bombay on January 15 for the homeward voyage. Of these, nearly all had made the whole or part of the tour in Southern India arranged to take place after the Congress in Calcutta. This tour embraced visits to Madras, Mysore, and Bangalore, which

none would willingly have missed. After a hot journey south, Madras received the delegation with a very perfect day, during which the University gave a luncheon, and most of the delegates attended a garden party arranged by the city in honour of the Viceroy. The small but very attractive aquarium, and other points of interest, were visited. The wonders of Mysore will never be forgotten by the visitors. They were received as guests of the State throughout their too short sojourn and were shown many of the institutions which are there maintained by an enlightened Government, while when darkness fell they viewed with amazement the illuminated fountains at the great power dam on the Cauvery, and the blaze of lights from the city as seen from Chamundi Hill. At Bangalore the Indian Institute of Science and other institutions were visited, and the party was entertained to tea by the Dewan Sahib of Mysore.

"At all three cities visited during this southern tour, as indeed at every city visited throughout India, members of the delegation have freely responded to the many calls upon them for lectures, and all, whether so occupied or not have had constant opportunity for the renewal of contacts with old students now occupying responsible positions in the places visited, and for making new acquaintanceships with workers in their various fields of interest. The whole spirit of the visit has been one of mutual and practical help, and nothing has impressed us more than the immense interest of the community in the delegation, and especially that of the students who have thronged the lectures and incidentally demanded of us inconceivable numbers of autographs. The visit has been said, by many influential Indians, to have been a great event for India: certainly it has been so for the delegation."

Museums and the Research Worker

SOME aspects of recent criticism of ethnographical collections in the museums of Great Britain are considered on p. 179 of this issue of NATURE. It cannot be emphasized too frequently that the great national collections—the question under discussion cannot affect the smaller museums except in so far as they are prepared to specialize—being supported out of public funds, it is their bounden duty to perform a function of public utility; whether that may be, as is now generally required of them, that they should take their share in making efficient and supplementing the machinery of general education, or the more highly specialized function of assisting the research worker. To the latter rather than to an attachment to a traditional system must be attributed the classificatory organization which has been subjected to criticism. For it must not be forgotten that the great national collections, as well as the smaller ethnographical museums, some highly specialized, such as the Pitt-Rivers Museum at Oxford, the Museum of Archaeology and Ethnology at Cambridge, or the Manchester University Museum, have been the laboratories for the scientific researches of the