

## News and Views

Sir Sidney Harmer, K.B.E., F.R.S.

SIR SIDNEY HARMER, who received the Linnean Medal at the anniversary meeting of the Linnean Society on May 24, has had a long and distinguished career as a zoologist, and is still actively engaged in research. His published works deal for the most part with two widely different groups of animals, the Polyzoa and the Cetacea. His first paper (1884) described the anatomy of *Loxosoma*, and his most recent, issued this year, was the third instalment of his great report on the Polyzoa of the *Siboga* expedition. Perhaps his most outstanding contributions to science have been the demonstration of the chordate affinities of *Cephalodiscus* (published in an appendix to McIntosh's *Challenger* Report, 1887), and his discovery of embryonic fission in cyclostomatous Polyzoa (1893). While superintendent of the University Museum of Zoology, Cambridge, Harmer, in collaboration with the late Sir Arthur Shipley, planned and edited the great "Cambridge Natural History", the ten volumes of which appeared between 1896 and 1909.

IN 1909 Harmer left Cambridge to become keeper of zoology in the British Museum (Natural History), and ten years later he was appointed director of that institution. Shortly after he went to the Museum, he devised a scheme, with the co-operation of the Board of Trade and the Coast Guard, for recording the occurrence of Cetacea stranded on the British coasts, and in the course of twenty years a vast amount of information has accumulated in regard to the distribution, migration, and seasonal occurrence of the various species. Much of this information, but not the whole of it, has been embodied in the ten reports published by Harmer. From the beginning of his association with the Museum, Harmer also took a leading part in pressing on successive governments the urgent need for the regulation of the whale fisheries, particularly in the Antarctic. His efforts were largely responsible for the organisation of the very important scheme of oceanographical research now being carried out by Dr. Stanley Kemp and his staff for the "Discovery" Committee, an undertaking which can only be compared in importance with the *Challenger* expedition.

Prof. W. B. Scott

THE Boston Society of Natural History has awarded the Walker Grand Honorary Prize of 500 dollars to Prof. William Berryman Scott, of Princeton, New Jersey, for "his half century of conspicuous effort to advance the science of vertebrate paleontology in North America". Prof. Scott is professor emeritus at Princeton University, where he held the Blair professorship of geology and palaeontology from 1884 until 1930. He was born in Cincinnati, 1858, received his bachelor's degree from Princeton, Ph.D. from Heidelberg, LL.D. from the University of Pennsylvania, and honorary doctorates of science from Harvard and Oxford. He is a past president of

the Geological Society of America and the Paleontological Society of America, his specialty having been vertebrate palaeontology. He is the author of a well-known geological textbook, also of the "History of Land Mammals in the Western Hemisphere", and of the "Theory of Evolution", and has written some fifty monographs on geological and palaeontological subjects. The Walker Grand Prize is awarded by the Society from the trust fund given by Dr. William J. Walker in 1864 not oftener than once in five years, for such scientific investigation or discovery in natural history as the Society may think deserving thereof, providing such investigation or discovery shall first have been made known and published in the United States. The award is made solely for merit.

Henry Francis Blandford, F.R.S. (1834-93)

HENRY FRANCIS BLANDFORD, the distinguished meteorologist and geologist, brother of William Thomas Blandford (1832-1905) president of the Geological Society, was born in Bouverie Street, Whitefriars, London, on June 3, 1834. Like his brother, he was trained at the Royal School of Mines under De la Beche, Smyth and Percy, and at the Mining Academy of Freiberg, and in 1855, with his brother, joined the Geological Survey of India. After serving for seven years, ill-health compelled him to resign from the Survey and he became a professor at Presidency College, Calcutta, a post he held from 1862 until 1874. From 1867 he was also meteorological reporter to the Government of Bengal, making a close study of cyclones, and in 1874 was appointed chief of the Meteorological Department of India. Retiring in 1888, he took up his residence at Folkestone. He died on January 23, 1893, at the comparatively early age of fifty-eight years. Elected F.G.S. in 1862, and F.R.S. in 1880, in 1884 he was elected president of the Asiatic Society of Bengal. He wrote some fifty papers on meteorology and geology, and his work as a meteorologist caused him to be elected an honorary member of various foreign meteorological societies.

Francesco Denza, 1834-94

ON June 7 the centenary occurs of the birth at Naples of Father Francesco Denza, the eminent Italian astronomer and meteorologist. At the age of sixteen years, he joined the order of Barnabites and studied at Rome, where he came under the influence of Secchi, the astronomer. From 1856 until 1890 he was attached to the Barnabite College at Moncalieri, where in 1859 he established an observatory. Keenly interested in meteorology, he did much to further its study in Italy, founding the *Bolletino mensile de Meteorologia*, and in 1881 was chosen to be the first president of the Italian Meteorological Society. He was also well-known for his observations on meteors and his researches in terrestrial magnetism. He represented the Pope at

the Congress of Scientific Societies held in France in 1884, and again at the Paris Congress held in 1887 to inaugurate the Astrographic Chart of the heavens. Through him the Vatican Observatory was chosen as one of the eighteen observatories to take photographs for the preparation of the Chart, and in 1890 he was appointed as its director. He died at the Vatican on December 14, 1894, at the age of sixty years. He had been elected an honorary member of the Royal Meteorological Society in 1870, and at the time of his death was president of the Accademia dei Nuova Lincei.

#### Prof. Ernst Küster

PROF. ERNST KÜSTER, who has been for thirty-one years editor of the *Zeitschrift für Wissenschaftliche Mikroskopie*, has been elected to honorary fellowship of the Royal Microscopical Society. Prof. Küster is professor of botany in the University, and director of the Botanical Institute and Gardens, Giessen. He was previously assistant in the Botanical Institutes at Munich and at Halle, professor of botany in the University of Kiel, and later in the University of Bonn. He is the author of "Pathologische Pflanzenanatomie" (3rd Ed., Jena, 1925), "Anleitung zur Kultur der Mikroorganismen" (3rd Ed., Leipzig, 1921), "Ueber Zonenbildung in kolloidalen Medien" (2nd Ed., Jena, 1931), and other botanical treatises, and of numerous scientific papers.

#### Economics of Nutrition

In the report of the Committee on Nutrition of the British Medical Association published last winter, the daily requirement of food was assessed at 3,400 Calories, and it was recommended that it should contain 50 gm. of animal or first class protein. These figures differed from those of the Committee of the Ministry of Health, which were 3,000 Calories and 37 gm. of animal protein. A controversy arose as to which set of data was correct. A conference of representatives of the two committees has since met and published a joint report (London: H.M. Stationery Office, 2d. net). The Ministry's Committee gave 3,000 Calories as a guide for the energy value for large communities and institutions. The figure of 3,400 Calories of the British Medical Association Committee was meant to apply to families with children with the man performing a moderate amount of muscular work, and to be subject to an allowance of 10 per cent for waste. As was stated in an article discussing the position in *NATURE* of January 13, p. 53, there is no real difference between the figures. The joint committee points out that no hard and fast line can be taken for differences in age and differences in work, and it gives a scale of Calories for different people. It is agreed that 80-100 gm. of total protein suffices for the daily need, the precise amount depending upon physique, occupation, habits, taste and climate. As regards the amount of animal protein, it is pointed out that there has never been any exact determination of the desirable proportion of animal to vegetable protein, and that 37 gm. is the lowest value obtained from statistics; 50 gm. is

recognised as a good value for families with growing children, who need relatively more animal protein than adults.

#### Helium and Other Rare Gases

In the second Research and Development Lecture delivered under the auspices of the British Science Guild at the Royal Institution on May 30, Lord Rutherford said that there is no more interesting story in the history of science than the sequence of events, towards the close of the last century, which led to the discovery and isolation of a new group of rare gases existing in the atmosphere by Lord Rayleigh and Sir William Ramsay. The discovery that argon is present in the air in about one per cent by volume was rapidly followed by the discovery of a whole new group of inert gases, namely helium, neon, krypton and xenon. Neon is present in the air in only about one part in 100,000 by volume, and helium, krypton and xenon are present in still smaller quantities. In the early stages, these gases could only be separated in small quantities after much expense and trouble, and in a sense were regarded as scientific curiosities. The subsequent development of large liquid air plants for the separation of pure oxygen from the atmosphere, in which many thousands of tons of air are liquefied annually, made possible arrangements for the separation of argon and neon in considerable quantities. On account of their characteristic properties, some of these gases have been found exceedingly useful to industry. For example, more than 30,000 cubic metres of argon are used annually in Europe in the production of the highly efficient gas-filled electric lamps. In all, about 45 million of these lamps are made each year, requiring the separation of argon from more than 5,000 tons of air. The ease with which an electric discharge passes through neon, and its characteristic luminosity, have led to a great development in the use of this rare gas for the illuminated signs with which we are so familiar in our cities to-day.

In some respects, however, the history of the use of helium is still more striking. The presence of this gas was first detected in the sun by Sir Norman Lockyer in 1868, and for this reason he named it 'helium'. The presence of helium on the earth was first observed by Ramsay in 1895 in the gases released from old radioactive minerals. In the course of the next ten years, a few cubic metres of helium were laboriously extracted from radioactive minerals. During the War, the Board of Invention and Research of the Admiralty recognised that it would be much safer if observation balloons and dirigibles could be filled with a light, non-inflammable gas like helium rather than with hydrogen, for there is only eight per cent difference in their respective lifting powers. At the suggestion of the Board, Prof. J. C. McLennan, of the University of Toronto, made a systematic examination of the helium resources of the Empire. It was found that large supplies of helium were available in the natural gas fields of southern Alberta,