

conflicting interests now warring in Palestine. After a distinguished career as a classical scholar at Magdalene College, Cambridge, he joined the Sudan Political Service in 1905, and served in the provinces of Kordofan, Blue Nile and Khartum. During the Great War he served as political and intelligence officer with the expeditionary force which reoccupied Darfur in 1916. A successful official career culminated in the appointment of civil secretary, which he held from 1926 until 1934, on several occasions acting as governor. In the course of his service in the Sudan he became our foremost authority on the ethnology and history of the Sudanese tribes, his published works including "The Tribes of Northern and Central Kordofan" (1912), "A History of the Arabs in the Sudan" (1922) and "The Arabs of the Egyptian Sudan" (1924). For these studies he was awarded the Burton Memorial Medal of the Royal Asiatic Society in 1928. Sir Harold's onerous duties as Governor of Tanganyika have not precluded his continued interest in scientific studies, which has been directed mainly to local archaeology and the foundation of a museum at Dar-es-Salaam.

#### Memorial to Dr. Samuel Smiles (1812-1904)

On Saturday, December 4, a bronze tablet to the memory of Samuel Smiles was unveiled at Zion School, Leeds, by Sir James Baillie, vice-chancellor of the University of Leeds. In the course of his speech Sir James said: "Smiles had a singularly sane outlook on human life and a remarkable grasp of the simple elementary principles on which human society ultimately rests. He made himself eminent in his spare time—what we should now call his leisure moments, at the end of busy days. Part of his spare time in Leeds he gave to those who attended Zion School." Smiles's first book, entitled "Physical Education", was published in 1837 at his own expense and reprinted in 1905. Messrs. John Murray published in 1905 his "Autobiography", which contains a copy of his portrait, by Sir George Reid, in the National Portrait Gallery, and in 1857 "Life of George Stephenson", which is an engineering classic. The latter arose from his meeting Stephenson at the opening of the Leeds and Derby railway, later absorbed by the Midland. He collected material during week-ends by interviewing people on Tyneside who knew of the early work, and also he received information from Robert Stephenson and the Peases of Darlington, etc. "Self-Help" arose from lectures he gave in Leeds, particularly one on education of the working classes in 1845. It was published in 1859, after being refused by a well-known publisher. Nearly half a million copies have been printed and it has appeared in the record number of twenty-six languages. In it and in "Character and Duty" Dr. Smiles showed the British people to the world as very virile and inventive. Although trained as a physician he spent most of his working life as editor and writer of books, and from 1845 until 1866 was secretary of two railway companies. He was largely responsible for the Charing Cross railway and terminus.

In addition to the memorial tablet in Zion School, Alderman P. T. Leigh, chairman of the Library Committee, accepted copies of Dr. Smiles's books in bookcase presented by Sir John Murray for the branch library, which has occupied part of Zion School since 1870—the first municipal free library. Sir Walter Smiles, M.P., presented a picture of his grandfather copied from the oil painting in the National Portrait Gallery, to be hung in the civic hall along with other portraits of Leeds worthies. There was an exhibition of relics concerned with Dr. Smiles: copies of first editions of his early books, autographed letters, family bible and portraits, and the *Leeds Times* of 1838 containing his first speech in Leeds on repeal of the Corn Laws.

#### Centenary of William Harkness, 1837-1903

On December 17, 1837, William Harkness, the American astronomer, was born at Ecclefechan, Scotland, his father being a Presbyterian minister. In 1839, the family removed to New York, and after attending private schools Harkness entered the University of Rochester and in 1858 took his degree. A short spell of journalism was followed by the study of medicine, and during the Civil War, at intervals, he served as a volunteer surgeon. In 1862, however, he was appointed an assistant to James Melville Gilliss (1865) at the United States Naval Observatory, and it was at Washington that he passed practically the remainder of his life. He observed the solar eclipses of 1869 and 1870, and in 1871 was appointed one of the original members of the Transit of Venus Commission, being concerned with the preparations for the observation of the transits of 1874 and 1882, and also with the discussion of the results. The transit of 1874 he observed at Hobart, Tasmania. In September, 1894, when new buildings had been erected for the Observatory, regulations were promulgated by the Secretary of the Navy providing for the first time for an "Astronomical Director", who was to "have charge of and to be responsible for the direction, scope, character and preparation for publication of all work purely astronomical, which is performed at the Naval Observatory". To this post Harkness was appointed, the office providing, it was afterwards said, "a maximum of responsibility and a minimum of power". To his duties were added three years later the directorship of the "American Ephemeris and Nautical Almanac". The work, however, proved too much; he broke down and in 1899 retired, being granted the rank of Rear Admiral. He died at Jersey City, N.J., on February 28, 1903. Harkness was one of the founders of the Philosophical Society of Washington and in 1893 served as president of the American Association for the Advancement of Science.

#### Aborigines of Australia

The petition of eighteen hundred Australian aborigines addressed to the King, and asking for representation of their interests in the Federal Parliament (see *NATURE*, Nov. 6, p. 798), whether it attain its end or not, has at least served to direct attention

once again to the question of their present condition and their future. Difficulties of the situation, which contribute to the failure to find a solution of a problem—for long a reproach to the Australian people—are set out with due appreciation of their weight by an Australian correspondent of *The Times* in an article in the issue of November 25. After pointing out the gravity of conditions which tolerate “tribe after tribe dying on their feet”, and contrasting conditions among the natives of New Guinea, the writer refers to the mentality and character of the aborigines as in no small measure responsible for much of the failure of the Governments to check the degeneration which is taking place. Even such a beneficial, and indeed essential, provision in the organization of aboriginal protection as medical attention is rendered in a degree ineffective through the disinclination of the aboriginal to take advantage of it, owing to magical belief or misunderstanding. At the same time the nomadic habit, as well as the tendency to drift to centres of white civilization, neutralize the advantages of reserves of aboriginal lands. On the other hand, the inadequacy of the financial provision made by the Australian Governments is stressed, its most serious consequence being the lack of a trained body of special officers, such as the service organized by Sir Hubert Murray in Papua. A graver indictment of the Australian people appears in the same issue of *The Times* in the form of a report of a valedictory address by Prof. F. Wood-Jones to the Victorian Anthropological Society, which, notwithstanding a certain lack of restraint in language and certain inaccuracies, cannot be passed over by Australia as ill-founded, even though Prof. Wood-Jones, as well as the writer in *The Times*, as has been pointed out in subsequent correspondence, gives little or no credit to Federal and State Governments for what has been attempted to ameliorate aboriginal conditions.

#### Marconi School of Wireless Communication

QUITE early in its history, the Marconi Company experienced a need for providing its recruits to the engineering and operating staffs with some centralized instruction in the technique of wireless communication. This technique was naturally ahead of any training provided by the universities or elsewhere, and, accordingly, a residential school for the training of probationary engineers of the Marconi Company was opened in 1901. This event established a notable precedent in industrial training institutions. From this date, the School has been in nearly continuous operation, with modifications and expansion of its activities from time to time to meet the demands presented by the progress in communication. Some two years ago it was decided to make very substantial increases in the facilities provided, and on November 29 last, representatives of the technical press were invited to inspect the new buildings and equipment of the Marconi School of Wireless Communication at Chelmsford. Its premises have been rebuilt and equipped on modern lines, its curriculum has been reorganized and additional appointments have been made to the staff.

As a training institution, the School is a leading example of the higher industrial education, and provides the link between the universities and the Research, Development and Engineering Departments of the Marconi Company. All engineering and physics graduates on their appointment as probationer engineers are given a course in experimental and applied wireless communication engineering at this School, which includes in its syllabus the application of circuit theory, the practice of valve, receiver and transmitter technique and experience in the design, construction and testing of representative aerial and feeder arrangements. A series of lectures is also given during the five months' session covering the whole field of wireless communication and a further series on engineering mathematics. The new School possesses a central college building containing the main experimental laboratory, two smaller research laboratories, a standards room, lecture theatre, library, common room, and general offices; and in the grounds are a number of detached buildings housing telephone terminal gear, direction finding plant, transmitters and television equipment. About sixty students are being trained at the present time; the lecture theatre has a seating capacity for seventy-five students and many more than this number can be accepted for work in the various experimental sections of the School. A hostel, with a limited accommodation, is available for those students who desire to live near by. A more detailed description of the School and of the facilities which it provides is given by the principal, Mr. H. M. Dowsett, in the *Marconi Review*, No. 66, May–August 1937.

#### Iodine in Inorganic and Organic Chemistry

FOR his Friday evening discourse at the Royal Institution on December 3, Prof. Irvine Masson discussed “Iodine”. After a reference to the important part played by Sir Humphry Davy in the discovery of iodine (1812–1814) during his honorary professorship at the Royal Institution, the first half of the discourse reviewed the functions of this element in Nature. As a component of rocks, minerals, soils, and dissolved salts, iodine is widespread but is exceedingly scanty. Even in its chief commercial source, the nitrate deposits of Chile, its compounds are present only as minor impurities. It began to be significant, however, when organic life began. Certain marine creatures are rich in it, notably kelp, and in horny sponges (bath sponges) and those corals the skeletons of which are horny, not calcareous. In them, the iodine is in the skeleton, as a well-defined organic compound, di-iodotyrosine, closely related to the fairly simple compound tyrosine, which is a frequent constituent of proteins. Whether the organic iodine is useful to the vital processes of the cell-colony has not been ascertained. The same substance is one of the two iodine compounds in the thyroid gland; and although it there seems to have little or no direct physiological activity, it appears to serve as the chemical forerunner of the other and more complex iodine compound, which the gland evidently synthesizes from it, namely, the hormone