

certainly unique. Mr. Ray was a member of the Cambridge Anthropological Expedition to the Torres Straits in 1899, of which Dr. A. C. Haddon was the leader. Mr. E. Torday receives the medal in recognition of his work in the Belgian Congo, where he conducted an expedition which collected a mass of information relating to the social organisation and religious beliefs of the tribes and brought back a remarkable collection of ethnographical objects, some of which revolutionised previous ideas of the capabilities of the African as an artist.

RECENT appointments to scientific and technical departments made by the Secretary of State for the Colonies include three assistant conservators of forests: Mr. R. V. H. Porter to Nigeria, Mr. A. K. Gibbon to Tanganyika Territory, and Mr. F. S. Walker to the Federated Malay States. Mr. C. B. Taylor has been appointed a superintendent, Agricultural Department, Nigeria, and Mr. R. H. Cowan, produce inspector in the same Department. Mr. R. M. Maynard has been appointed district agricultural officer, Tanganyika Territory. Among recent transfers and promotions notified are the following: Mr. H. A. Tempany (director of agriculture, Mauritius) to be director of agriculture in Malaya; Mr. H. B. Waters (deputy assistant director of agriculture, Nigeria) to be deputy director of agriculture, Gold Coast; Mr. G. N. A. Hall (veterinary pathologist, Uganda) to be veterinary pathologist, Nigeria. Mr. W. Allan has been appointed assistant research officer, Northern Rhodesia.

CATALOGUE No. 510 of Messrs. Francis Edwards, Ltd., 83 High Street, Marylebone, W.1, is of bibliographic interest, being devoted to early newspapers, magazines, periodicals, and journals of learned societies. A few of the items relate to scientific publications.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A principal of York Technical Institute—The Secretary, Education Offices, York (Dec. 29). Two junior research assistants in the High-Pressure Gas Research Laboratories of the Department of Chemical Technology of the Imperial College of Science and Technology—The Registrar, Imperial College of Science and Technology, South Kensington, S.W.7 (Dec. 30). A junior lecturer in metallurgy in the University of the Witwatersrand, Johannesburg—The Secretary, Office of the High Commissioner for the Union of South Africa, South Africa House, Trafalgar Square, W.C.2 (Jan. 15). A principal of the School of Science, Technology, Commerce, etc., of the Bournemouth Municipal College—The Director of Education, Town Hall, Bournemouth (Jan. 19). A secretary of the North-Western Polytechnic—The Clerk to the Governors, North-Western Polytechnic, 3 Temple Gardens, E.C.4. A junior assistant under the Directorate of Radio-logical Research, Research Department, Woolwich—The Chief Superintendent, Research Department, Woolwich, S.E.18. A temporary librarian at the Leicester College of Technology—The Registrar, Colleges of Art and Technology, Leicester.

Our Astronomical Column.

CHARACTER FIGURES OF SOLAR PHENOMENA.—The first number of a *Bulletin for Character Figures of Solar Phenomena* has just been issued from Zurich under the auspices of the International Astronomical Union. It was resolved at the Leyden meeting of the I.A.U. to publish a quarterly bulletin of solar data, so that investigators might, with as little delay as possible, be provided with daily index figures of solar activity, much in the same way that the De Bilt figures furnish magnetic data.

The first bulletin, covering the period January–March 1928, contains for each day, whenever possible (1) the relative spot numbers for the whole disc and for a central zone between the meridians 30° east and west of the sun's central meridian; (2) a measure of the intensity of the sun's ultra-violet radiation; (3) character figures expressing the area and intensity of calcium flocculi in the central zone of the disc; (4) and (5) similar character figures for bright H α flocculi and dark H α flocculi respectively. There are a number of contributing observatories, and the bulletin is compiled by Prof. W. Brunner, of the Federal Observatory, Zurich. Those engaged in tracing solar-terrestrial relationships will have a useful source of current solar data provided quarterly by these bulletins.

MATHEMATICAL TABLES.—The *Handbook of the British Astronomical Association for 1929* contains a list of tables by Dr. L. J. Comrie, chief assistant at the *Nautical Almanac* Office, together with notes and comments on the special features of each. He is such an expert in the use of tables that his experience is of great value. He himself, in conjunction with Prof. Milne-Thomson, is bringing out a volume of 4-figure tables which will be more extensive than any existing

4-figure tables and will include hyperbolic and inverse trigonometrical functions.

The increasing use of calculating machines has once more brought natural functions into importance; Brandenburg, Gifford, and Hayashi have all brought out tables of this kind; the last two extend to 8 decimals. The increase of accuracy in some fields of astronomy makes this degree of accuracy advisable. Bauschinger and Peters brought out logarithm tables to 8 decimals several years ago; Dr. Comrie informs us that Peters has also prepared an 8-figure table of sum-and-difference logarithms, but this is held up for want of means of publication. The publication of the present list may be useful in such respects as this by helping to put prospective purchasers in touch with the publishers.

CAPE CATALOGUE OF 4569 STARS.—This catalogue is based on observations made with the reversible transit circle at the Cape between 1918 and 1925. Observations of the sun, Mercury, and Venus indicate a correction of about -0.05 sec. to Newcomb's equinox. Similar corrections have been found at other observatories; it is not applied in this catalogue, which is still based on Newcomb's value. The stars in this catalogue are all contained in Boss's preliminary general catalogue. They show a close agreement with Eichelberger's fundamental catalogue; this is to be expected owing to the high weight given by Eichelberger to the Cape observations; many of those in the present catalogue had been used by him. The correction found to Boss's declinations between 10° and 30° north decl. is $0.44''$, in fair agreement with $0.51''$ given by the recent Greenwich Altazimuth catalogue.