## Current Topics and Events.

OUR recent article on "Government Publications and their Distribution" (NATURE, December 29, p. 925), aiming at preciseness, dealt only with publications having a distinct scientific bias, but another aspect of Government publishing is discussed in a lengthy editorial article on "Official Publications" in the *Electrical Review* of January 11. The writer is in "complete agreement" with our plea, and cites many cases where industrial and humanitarian progress is likely to be prejudiced through the present policy of H.M. Stationery Office. He points out that reports such as those of mine inspectors, and of chief and sub-inspectors of factories and workshops, are placed, on account of their cost, beyond the reach of many who would benefit by them and were accustomed to peruse them. Yet the former contain hints of vital importance to men employed underground, and the latter not only exposed the "abominable" as well as the enlightened conditions of work in various industries, but "indicated the official measures that had been taken to secure improvements by means of warnings, prosecutions, and so forth, and suggested other and new means for securing that working conditions should improve simultaneously with the progress of civilisation." We also note that "all that even the Technical press is provided with [in the matter of reviewing] is an official list every few days of new publications that are on sale, so that it may know *which to buy* for the purpose of acquainting readers with the nature of their contents"—an arrangement which seems to be neither good propaganda nor good business from the publishers' point of view.

AT a meeting held at the Mansion House on January 31, the British Empire Leprosy Relief Association appealed for 250,000*l.* for a campaign to extend the use of the improved treatment of leprosy as an aid to the reduction and eventual eradication of leprosy from the Empire. Messages were read from the Prince of Wales as patron, and the Viceroy of India, and donations of 100*l.* from both the King and the Prince of Wales were announced. The Lord Mayor commended the appeal, and Lord Chelmsford as chairman of the general committee, and the Duke of Devonshire and Sir Sydney Olivier, Secretary of State for India, supported the proposals. Sir Humphry Rolleston, president of the Royal College of Physicians, spoke on the history of leprosy and its prevalence in Great Britain in the Middle Ages, and stated that there is good reason to believe that Sir Leonard Rogers had found in the fatty acids of certain oils a remedy that bade fair to be a real cure, and he was followed by Sir Leonard himself, who gave a brief outline of recent researches, and pleaded for help to bring the new remedies within reach of lepers in the British Empire, in which work we are at present far behind the Americans. Our leading article this week suggests what might be done to improve existing conditions.

THE early efforts of those English pioneers in science, who, through their regular gatherings, received, promoted, and promulgated inquiries and papers on various aspects of natural knowledge, must always compel attention, especially when we recall, among the group thus engaged, the names of Boyle, Evelyn, Wren, Wallis, Glisson, and Hooke. Dr. Birch's "History of the Royal Society" (4 vols., 4to, 1756), a scarce work, contains voluminous original details covering the period 1660–87, relative to the movements of the "new philosophy." It is, however, unindexed, and hence is at best a perplexing miscellany, though it has a saving scheme of chronological presentment. We propose giving in a weekly column some selections from Birch's accounts, in the belief that they will prove of interest to readers of NATURE. The first group of these extracts appears elsewhere in the present issue.

A NEW laboratory for marine biological research was opened at Batavia on December 12 last. This, the first of its kind to be established close to the equator, offers great opportunities to naturalists desirous of investigating the problems of marine life in the tropics. For the zoologist there are rich fields of study round Batavia, including the river fauna of the Tji Liwung, the brackish life in the estuary and coastal ponds, and the varied marine fauna of the Sea of Java. For the botanist, there is a fine collection of East Indian beach and coast plants in the garden surrounding the laboratory, and easy access to the famous Botanical Gardens at Buitenzorg. The station consists of two main buildings, the laboratory facing the sea, and the aquarium behind it. The buildings are well equipped and are lighted throughout by electricity. In the laboratory a large room has been fitted up for the use of visiting naturalists, five of whom can be accommodated at the same time. They have at their disposal certain of the aquarium tanks and table-aquaria, as well as two boats for collecting fresh material, one a motor-boat, the *Max Weber*, working in the vicinity, the other a steamer of 322 tons displacement, the *Brak*, for longer voyages. The water for the aquarium is brought in by lighters from the open sea and stored in underground reservoirs. It is kept circulating through the tanks at a fairly even temperature by continuous pumping night and day, the whole water-content of the aquarium being renewed if necessary eleven times in the twenty-four hours. Naturalists wishing to work at Batavia are invited to apply to the Director of the laboratory, Dr. H. C. Delsman.

THE opening of the Imperial College of Tropical Agriculture in Trinidad in 1922 has involved as the almost necessary consequence the commencement of a journal dealing with the same subjects as does the College. We are therefore able to extend a welcome to *Tropical Agriculture*, the official journal of the Imperial College of Tropical Agriculture, the first number of which has just appeared, and, as is very often the case with first numbers, contains several more or less special articles by distinguished authors. The general arrangement and the contents of the journal are distinctly good. A paper of unusual interest is that of Prof. Dunlop upon Trinidad cacao, in which he analyses the causes of the depression in

this industry, which is just now badly in need of economic readjustment. Notes from other tropical countries form a novel feature of some interest, and book-notes, reviews, notes on recent research, college news, and a chapter upon the trend of the markets in various tropical products complete an interesting number. The price of the journal (6*d*. per month for 16 quarto pages) is moderate.

FOR the last decade, the French Jesuit Father Licent has been exploring the fossiliferous deposits of northern China, and has sent some valuable collections to Paris, including a fine series of remains of Pliocene mammals. A year ago he was joined by Father Teilhard de Chardin, professor of geology in the Catholic University of Paris who has had much experience of collecting in the caverns and rock shelters of France and Spain, and was associated with the late Mr. Charles Dawson in collecting from the river gravel at Piltdown, Sussex. According to a despatch from Peking published by the *Manchester Guardian* on January 31, Fathers Licent and Teilhard have now made an important discovery of human remains at a depth of sixty metres in a river deposit in northern Kansu, through which the existing river Shara Osso Goh has cut a deep gorge. There seems to be evidence of six individuals, and one well-fossilised skull with retreating forehead and large orbits may prove to be of special interest. No lower jaw was found. With the human remains there occur numerous bones of rhinoceros, horse, bison, camel, deer, elephant, and other mammals. One horse is said to be no larger than a collie dog. We learn from another source that at least ten well-preserved skulls of rhinoceros have been obtained, and that they closely resemble the skull of the ordinary woolly rhinoceros. With the human and other remains there are also numerous small rude implements of quartzite. When these discoveries are studied in detail they will probably add much to our knowledge of palæolithic man.

DR. ARTHUR SMITH WOODWARD will retire in May next from the keepership of geology in the British Museum which he has held since 1901.

THE Hugo Müller lecture of the Chemical Society will be delivered by Prof. J. Joly on Thursday, February 28, at 8 P.M., in the Lecture Hall of the Institution of Mechanical Engineers, Storey's Gate, Westminster, S.W.1.

A TECHNICAL assistant for the investigation of the fireproofing of fabrics is required by the Royal Aircraft Establishment, South Farnborough, Hants. Applications, giving full particulars of qualifications, and quoting reference A.25, should be sent to the Superintendent of the establishment.

A SCIENTIFIC assistant is required in the experimental department of H.M. Signal School, R.N. Barracks, Portsmouth, whose duties will be concerned with the development of receiving apparatus for wireless telegraphy. Applications, giving full particulars of experience, etc., must be sent by February 23 to the Secretary of the Admiralty (C.E.), Admiralty, S.W.1.

WE announced recently that a prize of 1000 dollars was being offered by a member of the American Association for the Advancement of Science for a notable contribution to science reported at the Cincinnati meeting. We now learn from *Science* that the prize has been awarded to Dr. L. E. Dickson, professor of mathematics at the University of Chicago, who is known for his monumental "History of the Theory of Numbers."

THE following committee has been appointed by the Secretary for Scotland "To consider and advise regarding the general organisation and finance of Agricultural Education and Research in Scotland":—Lord Constable (chairman), Sir James Adam, Mr. David Black, Mr. Joseph F. Duncan, Captain Walter E. Elliot, Miss Elizabeth S. Haldane, Mr. James Keith, Dr. George Macdonald. The secretary of the Committee is Mr. A. McCallum, of the Board of Agriculture for Scotland.

DR. S. Z. DE FERRANTI has been awarded the Faraday medal of the Institution of Electrical Engineers. The medal is awarded by the Council of the Institution not more frequently than once a year, either for notable scientific or industrial achievement in electrical engineering or for conspicuous service rendered to the advancement of electrical science, without restriction as regards nationality, country of residence, or membership of the Institution, and the award to Dr. de Ferranti is the third to be made. Dr. Ferranti was a pioneer in the supply of electricity, and his early grasp of the fundamental principles of electric power supply has had a profound and world-wide influence.

THE Rt. Hon. Viscount Leverhulme has been awarded the Messel medal of the Society of Chemical Industry. Lord Leverhulme, who is an old member of the Society, will deliver the Messel memorial lecture at the forthcoming annual meeting to be held in Liverpool on July 9 and succeeding days. The award arose out of a bequest in 1921 by Dr. Rudolf Messel, the well-known chemical manufacturer, to the Society of Chemical Industry. Dr. Messel had been president and honorary foreign secretary of the Society, and to perpetuate his memory the Council decided to award biennially a medal, to be called the Messel medal, to an eminent man distinguished either in chemical science or in chemical industry, who should be asked to deliver the Messel memorial lecture on the occasion of the annual meeting of the Society. The first award was made in 1922 to Prof. Henry E. Armstrong, who delivered his lecture at the annual meeting in Glasgow in 1922.

THE annual general meeting of the Institute of Metals will be held at the Institution of Mechanical Engineers, Storey's Gate, Westminster, on Wednesday and Thursday, March 12 and 13, commencing each day at 10.30 A.M. The presidential address will be delivered by Prof. T. Turner in the morning of March 12. A number of important communications are due for presentation and discussion at the meeting. The annual dinner of the Institute will be held at the Trocadero Restaurant on Wednesday, March 12. In

connexion with the meeting a ballot for the election of members and student members will be taken at noon on February 28, and those elected as a result of the ballot will have the privilege of membership for the extended period ending June 30, 1925. It is interesting to note that, for the first time in the Institute's history, the membership passed the 1500 mark on December 31 last.

MR. GEORGE A. MACMILLAN, chairman of the Committee of the British School at Athens, has written to the *Times* announcing that Sir Arthur Evans has made over to the trustees of the School his property at Knossos, in Crete. The gift thus includes the sites of the Palace of Minos and the Little Palace, and the headquarters house, Villa Ariadne, with its garden and vineyard, where Sir Arthur has carried out archæological investigations extending over the last quarter of a century. It was here that Sir Arthur made the discoveries which have enabled him to trace the rise of Cretan civilisation and to correlate it with that of Egypt. All Sir Arthur's rights as owner and excavator of the Palace are being vested in the British School, which will also have charge of the museum of illustrative stratigraphical material arranged in the magazines of the Palace. It is hoped that the revenue from the property will soon provide sufficient funds for maintenance, but, in the meantime, Sir Arthur is taking steps to supplement these sources of income and to provide for future endowment. The villa, which will probably become a summer school for the British School at Athens, will serve, it is hoped, as an archæological station for British research in Crete and the South Ægean.

AT the annual meeting of the Royal Microscopical Society held on January 16, the following officers and members of Council were elected to serve for the ensuing year :—*President :* Mr. A. Chaston Chapman. *Vice-Presidents :* Prof. F. J. Cheshire, Mr. E. J. Sheppard, Dr. C. Singer, Dr. C. Tierney. *Treasurer :* Mr. C. F. Hill. *Honorary Secretaries :* Mr. J. E. Barnard and Dr. J. A. Murray. *Members of Council :* Mr. C. Beck, Mr. S. H. Browning, Mr. H. G. Cannon, Dr. C. Da Fano, Mr. M. T. Denne, Prof. R. Ruggles Gates, Mr. T. H. Hiscott, Dr. R. J. Ludford, Mr. R. Paulson, Mr. D. J. Scourfield, Mr. J. Wilson, and Dr. H. Wrighton. *Librarian :* Mr. F. Martin Duncan. *Editor :* Dr. J. W. H. Eyre. *Curator of Instruments :* Mr. W. E. Watson Baker. *Curator of Slides :* Mr. E. J. Sheppard.

THE triennial prize of the "Fondation George Montefiore" will be awarded in 1925. It is given for the best paper on any electrical subject and its applications to industry which has been published or read during the years 1923–25. The awarding committee consists of ten electrical engineers, five of whom are Belgian, the chairman being the Director of the Institute. Every intending candidate should send in twelve copies of his paper either printed or typed to the Secretary of the Fondation George Montefiore, rue Saint-Gilles, 31, Liége, Belgique. The prize on this occasion amounts to 22,500 francs. The papers may be in either English or French. After the title of the paper the candidate should write "Travail soumis au concours de la Fondation George Montefiore, session de 1923 (1925)." The last day for receiving papers is April 30, 1925.

A CELEBRATION of the jubilee of the Physical Society of London is being arranged for the three days March 20–22, March 21 being the fiftieth anniversary of the first meeting of the Society, at which a paper was read by Prof. J. A. Fleming. Details have not yet been completely decided upon, but it is probable that the first two days will be devoted to a reception, to the delivery of the Guthrie lecture, and to the recounting of reminiscences by original fellows and other fellows of long standing, including, it is hoped, Prof. Fleming and Sir Oliver Lodge. Members and fellows of kindred societies are being invited to take part in the proceedings, and it is expected that representatives of foreign physical societies will be present. On March 22 a banquet will be held at the Connaught Rooms, Holborn, to which fellows will be able to bring guests. Many distinguished guests of honour are being invited by the council. The occasion promises, therefore, to be one of quite exceptional interest and importance in the history of the Society.

PROF. MORTON PRINCE, of Tufts College Medical School, Boston, Mass., is now in Great Britain, where he will deliver several public lectures, including in particular three at the invitation of the University of London, to be given at University College. Prof. Prince has long enjoyed an international reputation, especially on account of his investigations into cases of multiple personality. His "Sally Beauchamp," who had four personalities claiming to have nothing in common save tenancy of the same body, has become a household word among psychologists ("The Dissociation of a Personality" (1906)). At least equally interesting was his subsequent case of "B. C. A.," described in "My Life as a Dissociated Personality," *Journ. Abnorm. Psych.*, iii. To him we are further indebted for a very notable book on "The Unconscious" (1914), which supplies an almost inexhaustible wealth of facts and views on this fascinating topic. Among his other activities, Prof. Morton is the editor of the *Journal for Abnormal Psychology*.

AMONG the many conferences to be held at the forthcoming British Empire Exhibition at Wembley, the first World Power Conference should be of especial interest and importance to technical and scientific men. An official preliminary announcement states that the Conference is being promoted by the British Electrical and Allied Manufacturers' Association (Inc.) in co-operation with technical, scientific, and industrial organisations in Great Britain, Australia, Canada, India, and most of the more important foreign countries; each of these countries will have its own national committee, and representatives of these committees will constitute the international executive committee. The Conference is being organised on a very comprehensive scale. There will be five divisions, devoted respectively to power resources, power production, power transmission and

distribution, power utilisation, and general (economics, standardisation, education, etc.), each of these being subdivided into sections, which will number twenty-one in all. The charge for membership will be 2*l* and this sum will entitle members to admission to the Exhibition during the period of the Conference, June 30–July 12; to purchase, for a nominal amount, advance copies of papers to be read; and to participate in official tours to works, hydro-electric stations, and other places of interest in Great Britain, Norway and Sweden, and on the Continent, after the Conference has ended. Applications for membership, and all inquiries, should be addressed to the secretary of the World Power Conference, 36 Kingsway, London, W.C.2.

RAINFALL of 1923 is dealt with in considerable detail in the *Times* of February 4, the article being prepared by the Superintendent of the British Rainfall Organization of the Meteorological Office, Mr. F. J. W. Whipple. A preliminary survey is made from the much fuller details which will constitute later the annual volume of "British Rainfall" with its 5000 or more stations in the British Isles. The outstanding incidents referred to are the great thunderstorms of July, and the continued rains in Lancashire and North Wales producing floods in November. In February the rainfall was three times the average over an area from Cornwall to Staffordshire. In many places it was the wettest February on record, at Ross-on-Wye the wettest for at least 105 years. May was very wet in the north-east of Scotland; at Keith in Banffshire the fall was four times the normal and the highest for a forty years' record. In the British Isles as a whole the rainfall in February was 211 per cent. of the average, while in England and Wales it was 245 per cent. of the average. There was an excess of rain over the British Isles in every month except January, March, June, and December. Statistics are given for more than 200 stations. The rainfall for the year was above the average nearly everywhere; the largest excess occurred in the west; while there was a deficiency along the east coast and in some localities in Central England. The highest totals as yet available are 238 in. at Borrowdale, The Stye, Cumberland, and 189 in. at Snowdon, Carnarvon. The least rainfall for the year was 19·5 in. at Shoeburyness. In London, at Camden Square, the rainfall for 1923 was 27·03 in., which is 2·56 in. more than the normal.

## Our Astronomical Column.

THE RELATIVE VELOCITY OF BLUE AND YELLOW LIGHT.—Allusion has already been made in this column to Prof. Harlow Shapley's proof of the practically perfect identity of speed of light of all colours, based on observations of the variable stars in the globular clusters. The proof is given in detail in Proceedings of National Academy of Sciences, Nov. 1923. Inspection of the photographic and photo-visual light curves shows that the best phase to select for comparison is the passage through median magnitude on the ascending portion of the curves; the ranges of variation are different for the different colours, but the curves intersect in the middle of the ascending portion.

The photo-visual plates require an exposure of 20 minutes with a yellow screen; this is suspended for a short interval at mid-exposure, when the ordinary photographic plate is exposed; the mean epoch of both plates is therefore the same.

The final result for the difference of times to travel over an estimated distance of forty thousand light years is 10 seconds, with a probable error of 60 seconds. That is to say, the speeds do not differ by more than 1 in 20,000,000,000, though the wave-lengths differ by some 25 per cent.

The result is a proof of the very small amount of absorbing matter that can exist in the intervening space. The possibility of the phases in the two colours differing by a whole period was excluded by observing several variables of different periods.

D'ARREST'S COMET.—*Popular Astronomy* for January reports another early observation of this comet by Mr. J. E. Mellish at Wilmette, Ill., on October 4 at $14^h\ 30^m$ G.M.T. He describes it as large and faint, about 12′ in diameter, without central condensation; approximate position R.A. $18^h\ 10^m$, S. Decl. 20°; motion probably southward. Clouds prevented further observations, and unfortunately he did not communicate his discovery, which would probably have led to observations elsewhere. Prof. Van Biesbroeck, who has himself been observing D'Arrest's Comet during December at the Yerkes Observatory, noticed that Mr. Mellish's position agreed well with that comet, so there is no doubt of the identity.

All who discover undoubted comets should communicate the fact with the utmost speed; in case of doubt as to its nature one should wait until the object has moved visibly among the stars. The southern hemisphere has been left to do decidedly more than its share of cometary discovery in recent years. There should be a good prospect of success for energetic searchers in the northern hemisphere.

THE MOST DISTANT CELESTIAL OBJECT EVER MEASURED.—A Harvard Observatory Bulletin recently received contains a discussion by Prof. Harlow Shapley of the distance of the object No. 6822 of Dreyer's New General Catalogue of nebulæ. This is described as a miniature of the Magellanic Clouds, being an aggregation of faint nebulæ and stars.

Three of the methods used in the case of the globular clusters were applied:

(1) Comparison of its angular diameter with those of the Magellanic Clouds, assuming equal real dimensions, gives distance 300 to 500 kiloparsecs (this word being used for 1000 parsecs).

(2) Comparison of the size and brightness of the nebulæ with those in the Clouds; the mean magnitude is given as 15·7 in No. 6822, and 9 to 11 in the Clouds. This gives a distance of 280 to 500 kiloparsecs.

(3) The brightest stars in the object are of magnitude 18·5; assuming these to be reddish super-giants (their colour is inferred from their relative faintness on photographs) of absolute magnitude −3 to −4, the distance comes out 250 kiloparsecs.

Hence in round numbers we may take the distance as a million light-years, five times the distance found for the farthest globular cluster. It is inferred to be external to our sidereal system. The distances of the Magellanic Clouds were adopted as follows; large Cloud, distance 35, diameter 4·4 kiloparsecs; small Cloud, 25 and 1·6 kiloparsecs respectively.