

Current Topics and Events.

WE are glad to learn that Mr. Jowett, First Commissioner of Works, has now definitely refused to permit the sect of Latter-Day Druids, or "Church of the Universal Bond," to make use of Stonehenge for the burial of the ashes of their dead. In a letter to Lord Crawford, Mr. Jowett says, "I have decided that under no circumstances can any burials be permitted within the precincts of Stonehenge in the future." When the proposed desecration of the national monument became known, strong protests were raised against it, and in our issue of September 6, p. 364, we expressed the resentment generally felt in regard to the claims and intentions of the sect which contemplated such action. It would probably be difficult to prevent members of the sect from scattering ashes of certain of their dead members within Stonehenge, but we assume that no formal assembly for this purpose will be authorised. In his reply to a question in the House of Commons in July, Mr. Jowett said that no objection would be raised to the use of the national monument for the proposed burial of such ashes, provided that there was "no serious disturbance of the ground," and the sect announced that no such disturbance was intended, as there would be "nothing in the nature of an interment." It is not yet clear whether the sect may hold a service within the precincts of Stonehenge and formally scatter the ashes of their dead upon the ground.

AN interesting event took place at the house of the Royal Photographic Society, 35 Russell Square, on Saturday afternoon, September 13, when a memorial tablet to William Henry Fox Talbot was unveiled in the Library by Dr. G. H. Rodman, a past president of the Society. A distinguished company included Miss M. Talbot and Mrs. Stewart, grand-daughters of the distinguished investigator whose memory was honoured. Dr. Rodman, after referring to the historical collection of experimental apparatus used by Fox Talbot and presented by Miss M. Talbot to the Museum of the Royal Photographic Society, reviewed Talbot's photographic researches, which appear to have been commenced in 1834. In that year, on the lines of Schutze, Scheele, and Wedgwood, Talbot produced sun prints of lace and leaves on paper treated with silver nitrate and sodium chloride; in 1835 he secured an image on moist sensitised paper in the camera obscura on a bright day with an exposure of ten minutes. The results of his researches were communicated in 1839 to the Royal Society in two famous papers on photogenic drawing. In 1840, by the use of paper impregnated with silver iodide and gallo nitrate of silver, Talbot secured results in ten seconds. The process, which he termed the calotype process, was patented in 1841 after a means had been found to obtain positive prints from the negatives. Dr. Rodman paid an eloquent tribute to the value of Fox Talbot's contribution to science through these researches, upon which the modern practice of photography is based. The memorial, by Messrs. George and Fred Hawkings, consists of a finely modelled portrait of Fox Talbot, executed in bronze, with

decorative surroundings upon a marble background, and bears the inscription—"William Henry Fox Talbot, 1800-1877. This Memorial was erected by public subscription of photographers, 1922."

THREE years ago, the Notgemeinschaft der Deutschen Wissenschaft was formed for co-ordinating all help received in Germany for the learned staffs of universities, technical high schools, and other institutions. The third report of this society has been issued and can be obtained from the offices situated in the Schloss, the former residence of the Kaiser, Berlin, C2 Schloss, Portal 3. It seems that 1923-4 was a year of very real need indeed; the period lasting until November 1923, when a very adverse rate of exchange existed, making foreign purchases impossible, was followed by a period of great want of money, making not only foreign but also internal purchases difficult. In 1923, the Reichstag made three grants of money, although it was not in a position to pay immediately. The most valuable of these was made in October and consisted of 500,000 gold marks (approx. 27,000*l.*). It was not possible to continue the programme of buying the most important journals published during the War until the fall in the mark had ceased. The sum of 46,000 gold marks (2,500*l.*) was expended on the libraries of 23 universities, 11 technical high schools, and 300 larger institutions. Twenty-five copies of the Paris *Comptes rendus* had to supply all these institutions. Foreign periodicals were cut down to one-fortieth of pre-War supply, and journals in covers were circulated for two months at a time to the individual universities. It was only possible to buy sixty foreign books of average value 15 marks, for each institution, but this number was increased by gifts from Switzerland, Sweden, Norway, U.S.A., Spain, and Great Britain. During this period it was possible to publish 117 periodicals and 103 books in all fields of knowledge on the funds of the association. Many German firms helped the funds by providing apparatus for special researches. Hajime Hoshi, of Japan, provides 2000 yen monthly for the period of three years for chemical research. The General Electric Company of America provided 12,500 dollars, to which German electrical firms added 1250 dollars, for electrophysical research under a committee consisting of Planck, Laue, Franck, Haber, Nernst, and Wien. In all faculties it was possible to make grants to 100 people of 25 to 100 dollars for special researches and journeys. It is hoped that the financial situation this next twelve months will be such that Germany will be able to buy foreign periodicals and books and resume the international exchange of academic thought.

THE low temperature carbonisation of coal excites at the present time the widest interest. The intelligent member of the general public hears much of it as a solution of the smoke problem and that of the supply of liquid fuel. The truth is often difficult

to get, especially by those desirous of appraising the validity of inventors' claims. The information conveyed in a circular just issued by the Department of Scientific and Industrial Research will therefore attract widespread interest. The offer is made that the Fuel Research Staff of the Department will undertake to test, without fee, approved plant and processes for low temperature carbonisation, under certain conditions. Application must be made on forms obtainable at the offices of the Department, 16 Old Queen Street, Westminster, S.W.1. The gist of the conditions may be summarised as follows. Applicants are to furnish full information and facilities for prior inspection by officers of the Department to permit of a decision as to the justifiability of a test. If undertaken, the test will be made under the supervision of a member of the Fuel Research Staff. Applicants will have to provide all requisite facilities, including material, staff, labour and measuring instruments, considered necessary. Applicants may be represented during the test, but the decision as to duration and conduct of the test will rest with the officer of the Fuel Research Staff supervising. The Department reserves to itself the right to publish a report on the results of tests made.

Nor the least important of the departmental exhibits in the British Government Pavilion at the British Empire Exhibition, Wembley, is that illustrating the work of the Imperial Institute in promoting the use of little-known or new raw materials of the Empire. The exhibit directs attention to the principal branches of the Institute—the scientific and technical department, the technical information bureau, and the exhibition galleries—and illustrates by series of specimens and publications the nature of the work carried out by the departments and technical committees. A collection of British Empire timbers includes samples of little-known woods recommended for use in Great Britain by the Timbers Committee of the Institute and fully tested in the timber laboratory. The fibre exhibits include samples of cottons from Irak and Tanganyika, and an important exhibit of silk cocoons, reeled and thrown silk and fabrics woven therefrom, illustrates the endeavours of the Institute's Silk Committee to extend the production of raw silk within the British Empire. There is an interesting display of new materials suitable for paper-making, and of papers made from them. The investigations of plantation rubber, carried out in connexion with the Ceylon Rubber Research Scheme, are also illustrated. Other sections relate to the work on oil-seeds, essential oils, tobaccos, resins, tanning materials, and drugs; and there is a collection of economic minerals including tropical African coals; materials for pottery, brick, and cement manufacture, illustrated by specimens of products made from them at the Institute; and radio-active and other minerals. A free pamphlet describing the exhibits and the departments of the Institute has been issued and may be obtained at Wembley, or on application to the Director, Imperial Institute, London, S.W.7.

WE have received from Messrs. Thomas Firth and Sons, Ltd., a statement containing some of the

essential features of their exhibit at the British Empire Exhibition. A very wide range of products has been gathered together. Firth's stainless steel is now so well known amongst engineers that considerable attention will doubtless be focussed on this branch of their manufactures. A selection of many different types of turbine blading is shown, including twelve blades removed from a 2000 KW. Westinghouse turbine (steam pressure 200 lb., superheat 200° F.). Nine of these are of 5 per cent nickel steel, the remainder are of Firth's stainless steel. The actual hours run were 12,809 in six cases and 29,989 in the remainder. All the nickel steel blades show very marked signs of erosion, being very rough and pitted; the edges also show distinct signs of fraying. Those which have given longest service are quite worn out. The stainless steel blades, on the other hand, are as bright and as unaffected as the day on which they were inserted; the edges retain their initial sharpness and no signs of wear are apparent anywhere. Turbine engineers will doubtless take note of this remarkable difference in properties. A pump rod of similar steel which has been in use in an ammoniacal liquor pump is also shown. The life of carbon steel rods is never more than about six months. The stainless steel rod is worn only about $\frac{3}{4}$ ths of an inch. Moreover the surface is smooth and polished and not badly scored as it is in the case of carbon steel rods. A rake end is shown which has been in use in a roasting furnace for treating zinc concentrates containing 28-30 per cent. of sulphur. This has already been in use for three months, whereas the total life of a similar article made of mild steel is only three weeks. Various other products are shown which indicate the superior service given by Firth's stainless steel.

THE *Weather Map* of the meteorological service of the Dominion of Canada for July has recently been received. It shows the mean temperature and the total precipitation for the month, and graphically the difference of temperature from the normal and the comparative amount of rain over the whole of Canada. Part of July was exceedingly hot in southern British Columbia and very warm in the North-western Provinces. There was a deficiency of temperature amounting to 4° F. or more in eastern Manitoba, northern Ontario, and north-eastern Quebec. The precipitation varied considerably in different parts. The Edmonton district of Alberta and parts of Manitoba, as well as the northern coast of the Pacific, received from 4 to 6 inches or more of rain; some regions in Quebec had more than 5 inches. In the maritime provinces the general average was less than 2 inches. On the southern coast line of Nova Scotia, moisture from abundant fogs mitigated to some extent the drought, where rivers and streams are said to be very low and wells are drying up. At the back of the *Weather Map* the highest and lowest temperatures and the precipitation, with brief comments on the weather and the state of the crops, are given for each station, the latter being of considerable interest generally.

THE first conference of the Pathological and Bacteriological Laboratory Assistants' Association was held on September 1-5, in the Department of Pathology of the University of Edinburgh. The attendance was exceedingly good, there being members present from all parts of Great Britain and also from Africa. The local organisation was in the hands of a committee appointed by the Scottish Division of the Association. Lectures and demonstrations in laboratory technique were held, an exhibition of laboratory work and apparatus was on view, and places of interest in and around Edinburgh were visited. Members of the Scottish Division of the Association were responsible for the exhibition, while the London Division showed objects of tropical interest and demonstrated specimens illustrating the life history of parasites and their insect hosts. At the dinner on Friday evening, September 5, the president, Prof. A. E. Boycott, made the presentation of the first Woodhead medal to Mr. Albert Norman together with an address. This medal has been established by means of funds collected among members of the Association in memory of the late Sir German Sims Woodhead. In all, 1411. has now been received and the subscription list is soon to be closed. According to the regulations governing the award which have now been drawn up, it is to consist of a prize and medal, the former being open to members of the Association only. Awards may be made annually or at longer intervals at the discretion of the Memorial Committee.

IT is stated in *Science* that Dr. E. S. Dana, emeritus professor of physics and curator of mineralogy at Yale University, has been elected a corresponding member of the Vienna Academy of Sciences.

APPLICATIONS are invited from honours graduates in physics or electrical engineering for two junior assistantships in the National Physical Laboratory, Teddington. The necessary form of application may be had from the Director of the Laboratory, and returned to him not later than September 27.

THE autumn presidential address to the Radio Society of Great Britain will be delivered at 6 o'clock on Wednesday next, September 24, at the Institution of Electrical Engineers, by Prof. W. H. Eccles, who will deal with the latest developments of the position of the scientific amateur under the Wireless Telegraphy Regulations.

THE twenty-first anniversary of the School Nature Study Union will be celebrated on Saturday, September 27, in the Common Rooms of the London Day Training College, Southampton Row, High Holborn. There will be a reception by the president, Dr. P. Chalmers Mitchell, and an address by Mr. G. H. Gater, Education Officer, London County Council. The general secretary of the Union is Mr. H. E. Turner, 1 Grosvenor Park, Camberwell, London, S.E.5.

APPLICATIONS are invited for appointments as temporary assistant chemists at the Government Laboratory. Candidates must possess the degree of B.Sc., with not less than second-class honours or equivalent, and should have, if possible, experience

in investigative work. A form of application is obtainable from the Government Chemist, Clement's Inn Passage, W.C.2. The latest date for its return is September 30.

THE twenty-eighth autumn fungus foray of the British Mycological Society will be held at Bettws-y-Coed, N. Wales, on September 22-27. Mr. J. Ramsbottom will deliver his presidential address, entitled "The Taxonomy of Fungi," on September 24. Other papers to be read at the meeting are by Dr. Harold Wager on an aldehyde reaction in the tissues of fungi, and by Mr. A. W. Bartlett on a new species of Urophlyctis producing galls on *Lotus corniculatus*. Particulars of the foray can be obtained from the General Secretary of the Society, British Museum (Natural History), London, S.W.7.

THE Riga correspondent of the *Times*, in a message dated September 12, states that news had been received from Moscow announcing the arrival at Urga, Mongolia, of Mr. Roy Chapman Andrews, leader of the Third Asiatic Expedition of the American Museum of Natural History, who is seeking permission for the exploring and excavating work which it is proposed to carry out in 1925. This seems to dispose of the fears which were entertained in New York as to Mr. Andrews' safety. It was known there that he was on his way from Peking to Urga, and some anxiety was felt in view of the political disturbances which have been reported recently in Urga.

A LARGE individual of the loggerhead turtle, a tropical and sub-tropical species, was found alive near Dunvegan, Skye, on December 13, 1923. In recording its occurrence (*Scottish Naturalist*, 1924, p. 99) Dr. James Ritchie states that it measured 4 ft. 5 in. in length, weighed 309 lb., and was a female. It contained more than 1000 eggs, and is being mounted for exhibition in the Royal Scottish Museum, Edinburgh. Previous occurrences of the loggerhead turtle in Scotland date back to 1861, when two or perhaps three young specimens were found on the mainland about the same time; a small individual, recently dead, was washed up on North Uist in 1898.

THE British Research Association for the Woollen and Worsted Industries announces the following awards for the year 1924-25: Research fellowships to Mr. R. Burgess, of Nottingham, to enable him to continue his research at the University College, Nottingham, on the bacteriology and mycology of wool; and to Mr. J. E. Nichols, of Edinburgh, to conduct research at the Animal Breeding Research Department of the University of Edinburgh on the relationships between the wool fibres of various breeds of sheep: an advanced scholarship to Mr. H. Maldwyn Williams, tenable at the Scottish Woollen Technical College, Galashiels.

THE following awards for the year 1924-25 have been made by the Salters' Institute of Industrial Chemistry and approved by the Court of the Company:—Fellowships are renewed to Dr. W. G. Sedgwick, Armstrong College, Newcastle-on-Tyne, and Oxford, Fellow, 1923-24, and to Mr. W. Randerson,

Imperial College of Science and Technology, Fellow, 1922-23, and Hon. Fellow, 1923-24 (during tenure of Albert Kahn Travelling Fellowship). Fellowships are awarded to Mr. H. H. Evers, University of Liverpool; Mr. K. Knight Law, University College, Nottingham; Mr. H. S. Pink, University College, Nottingham, and Oxford; and Mr. V. E. Yarsley, Birmingham University. The Salters' Institute has also awarded seventy-two grants in aid to young men and women, employed in chemical works in and near London, to facilitate their future studies.

DURING the forthcoming winter, Mr. H. V. Garner, the guide demonstrator of the Rothamsted Experimental Station, Harpenden, will be available for lectures to Chambers of Agriculture and Horticulture, Farmers' Clubs, Agricultural Societies, etc., on the Rothamsted experiments in regard to the manuring of various crops, the management of farm-yard manure, and on chalking and liming. For Students' Societies and similar bodies, lectures could be arranged dealing with the field and laboratory work at Rothamsted. No fee is charged for Mr. Garner's services, but any association engaging him would be expected to defray travelling expenses. All communications regarding lectures should be addressed to the Secretary, Rothamsted Experimental Station, Harpenden.

THE next meeting of the American Association for the Advancement of Science is to be held at Washington on December 29-January 3, and local committees have been appointed. Great efforts are being made to deal with the question of wide publicity for the meeting. Authors of papers are being asked to prepare abstracts of their contributions, and

Science Service is again to co-operate with the Association's publicity committee in preparing material for the Press. The meeting will open with the address of the retiring president, Dr. C. D. Walcott, and it is hoped that the President of the United States will also address the Association and the associated societies. Another general meeting will be held on December 31, when Prof. A. S. Eddington will speak on "Relativity." In connexion with the meeting, an exhibition of scientific apparatus, methods, books, and products is being arranged as in previous years. Reduced railway fares have been arranged for members of the Association travelling to Washington from any part of the United States, or from places in Canada east of and including Armstrong, Fort William, and Sault Ste. Marie, Ont.

A DIRECTOR of research is required for the Forest Products Research Laboratories of the Department of Scientific and Industrial Research which are being provided to deal with pure and applied scientific research called for by the practical needs of the using industries and departments of state. The researches will be specially concerned with home-grown and Empire-grown timbers and other forest products. Candidates should possess good scientific qualifications, and a broad experience of the origin and use of forest products. Width of knowledge in forest economy, in the technology and practical problems of the wood-using industries, and in the bearing on these problems of scientific and industrial research, is considered of first importance. The latest date for the receipt of applications (which should be sent to the secretary of the department, 16 Old Queen Street, Westminster, S.W.1) is December 1.

Our Astronomical Column.

MERCURY A MORNING STAR.—Mercury will reach its greatest elongation west ($17^{\circ} 52'$) on September 27 and be favourably visible as a morning star. The planet may be seen shining over the eastern horizon about an hour before sunrise. Its position will be in Leo, about 28° E.N.E. of the brilliant planet Venus. On the day of its elongation the planet will rise at $4^{\text{h}} 12^{\text{m}}$ A.M., G.M.T., or $1^{\text{h}} 43^{\text{m}}$ before the sun.

Apart from the morning stars—Mercury and Venus—the zodiacal light will be strongly visible on clear mornings towards the end of September and the beginning of October, when the moon will not offer any impediment to observation.

STUDIES OF ALGOL VARIABLES.—Studies of the details of the light-curves of these variables, combined with spectroscopic measures of their radial velocities, are of importance from the information they give about stellar masses, diameters, and the degree of darkening of their limbs from atmospheric absorption. Mr. R. S. Dugan is undertaking an extensive investigation of their light-curves by photography at Princeton University Observatory. No. 6 of the Contributions of the Observatory contains researches on five variables. SZ Herculis is interesting from the slight degree of limb-darkening, the slight loss of light at secondary minimum, and the considerable masses, 4.6 and 1.4 of the sun, the spectral types being B8, B9. R Canis Majoris is the

only naked-eye star among the five, its normal light being 5.3 mag., and the loss of light at primary and secondary minimum, 0.56 and 0.06 respectively. The masses are small: assuming a mass-ratio of 3 to 1, they are 0.14 and 0.05 of the sun; the spectral type of the primary is FO. Two of the five stars, Y Camelop and RY Aquarii, give indications of limb-darkening. The most conspicuous loss of light at secondary minimum is that of SZ Herculis, 0.24 mag., as compared with 1.83 at primary minimum.

ENCKE'S COMET.—Several photographic positions of this comet were obtained in August by Mr. G. Merton with the 30-inch reflector at Greenwich. They indicate that the date of perihelion will be close to Oct. 31.437 G.M.T., which is 0.008 day later than that predicted by L. Matkiewicz. The comet should be an easy telescopic object at the end of September. The following ephemeris by Matkiewicz is for Greenwich noon.

		R.A.			N. Decl.		log r .	log Δ .
Sept.	21.	8 ^h	1 ^m	32 ^s	35°	12'		
"	23.	8	20	52	34	12	9.9699	9.8918
"	25.	8	40	25	32	57		
"	27.	8	59	58	31	28	9.9372	9.8810
"	29.	9	19	21	29	46		
Oct.	1.	9	38	23	27	51	9.9004	9.8782
"	3.	9	56	54	25	44		