

Committee embodied in the Statutes now awaiting confirmation, though it makes important concessions to historical features in the University which the Haldane Report treated rather shortly, yet draws from that Report most of its vital ideas. It must also be acknowledged that since 1913 feeling and opinion within the University have moved perceptibly and even strikingly towards a unity that makes those ideas more acceptable than they formerly were. It is too soon to prophesy about the University of London; but it may yet become a monument to the wisdom and imagination of those who saw in its possibilities of immense usefulness, and laboured to set it upon

the path of realisation. Among these Viscount Haldane will certainly hold a very high place.

Lord Haldane was so accessible and so widely known that it would be impertinent for one who cannot claim exceptional intimacy to attempt a sketch of his personality. Such a one may, however, be permitted to record that in prolonged conversations in recent years, during which the great statesman, student, and man of affairs talked freely about many phases of his wonderful experience, he never uttered a word of bitterness, and that one caught glimpses of a faith, a courage, and a spiritual nobility that could not but evoke reverential esteem.

T. P. NUNN.

### News and Views.

THE members of the Council of the British Association elected at the Glasgow meeting are as follows (the names of new members are in italics): Prof. J. H. Ashworth; *Dr. F. A. Bather*; Rt. Hon. Lord Bledisloe; Prof. A. L. Bowley; *Prof. C. Burt*; Prof. E. G. Coker; Prof. W. Dalby; Dr. H. H. Dale; *Prof. C. Lovatt Evans*; Sir J. S. Flett; Sir Henry Fowler; Sir Richard Gregory; *Dame Helen Gwynne-Vaughan*; Mr. C. T. Heycock; Mr. A. R. Hinks; Sir Henry Lyons; *Mr. C. G. T. Morison*; Dr. C. S. Myers; Prof. T. P. Nunn; Prof. A. O. Rankine; Mr. C. Tate Regan; Prof. A. C. Seward; Dr. F. C. Shrubbsall; Dr. N. V. Sidgwick; Dr. G. C. Simpson. Prof. J. L. Myres and Dr. F. E. Smith have been re-elected general secretaries. During the past year the Council was again deprived of the presence of Dr. E. H. Griffiths, general treasurer, owing to ill-health, but it is gratefully recorded in the Council's report that he did not allow this to deprive the Council of his valuable advice and reports on the finances of the Association. Nevertheless, Dr. Griffiths again tendered his resignation, and the Council, with the deepest regret, felt that he should not again be pressed to withdraw it. In accordance with precedent, the Council consulted a committee consisting of the president, general officers, and ex-presidents, in considering the nomination to be made in the room of Dr. Griffiths, as a result of which Sir Josiah Stamp has now been appointed to the office of general treasurer of the Association.

AN afternoon meeting at Glasgow of Section D (Zoology) of the British Association was devoted to a discussion of the work of the *Discovery* expedition. Dr. S. C. Kemp opened with a general account of the expedition; readers of NATURE will remember that Dr. Kemp has contributed articles dealing with the expedition to our columns (Oct. 30, 1926, and May 19, 1928). Mr. E. R. Gunther then described the distribution of the plankton on the whaling-ground, and Prof. A. C. Hardy showed its curiously discontinuous character. Unevenness was first revealed by his ingenious 'continuous plankton recorder,' but systematic netting during long runs indicated that the particular plankton (*Euphausia*) which is the food of the whale exists in dense patches a hundred metres or so in diameter and a kilometre or so apart. Mr. N. A. Mackintosh gave many interesting facts

resulting from the examination of the carcasses of 1683 whales. The growth was traced from the earliest embryo  $\frac{1}{2}$  in. in diameter, through the recognisable foetal whale of 6 in. long to the new-born 'baby' of 21 feet; then through lactation to weaning, and through adolescence to the astonishingly early maturity. The papers were discussed by Prof. Garstang, Dr. Chalmers Mitchell, Prof. Peacock, Mr. Heron-Allen, Dr. Cunningham, Mr. Arthur Earland, Dr. Bidder, Mr. Elmhirst, and others.

THE president of Section D, Prof. W. Garstang, in thanking the director and zoologists of the *Discovery* expedition for their communications, said that members of the Section had now heard preliminary accounts of all the *Discovery* researches. They had judged thereon that the scientific investigation had been well planned and well executed, and the interim reports alone were very valuable. In the name of Section D he assured Dr. Kemp and his colleagues that zoologists admire these achievements and the work which has led to them, and have full confidence that the further progress of the expedition will be marked by the successive attainment of valuable and well-founded results.

OWING to the regulations governing the introduction of scientific films into Great Britain, the paper by Prof. Rathjens on his explorations in Arabia had to be withdrawn from the programme of the recent International Congress of Orientalists at Oxford. It will be remembered that the Chancellor of the Exchequer has conceded that scientific films may be brought into England free of duty on a certificate from the Royal Society to the customs authorities that the film illustrates a scientific investigation (see NATURE, July 28, p. 138). Notwithstanding the fact that Prof. Rathjens on Aug. 9, and the secretary of the Congress on Aug. 10, had made application to the Commissioners of Customs for the admission of the film, and application was addressed to the Royal Society for the desired certificate, the customs authorities were prepared to admit the film only on a deposit of the duty, £31, 10s., "to be refunded in the event of the film being certified by the Royal Society." The ground for this decision was that the Royal Society being in vacation, it was difficult "to

make contact with officers of the Society qualified to give decisions in these matters." In the circumstances there was no alternative but for the paper to be withdrawn. A concession which functions only when the certifying body is not in vacation and its officers are accessible evidently scarcely meets the needs of the case.

THE justification for international congresses is, as Sir Charles Close states ("International Geographical Congresses," R. G. S. ; 1928), that science is essentially international, and every worker finds, from time to time, the need of freeing himself from the intellectual preoccupations of his fellow-countrymen. This is especially the case with geography, which of all branches of knowledge requires most to be studied from the point of view of a citizen of the world. The first International Geographical Congress was held at Antwerp in 1871; the twelfth, in Cambridge in July last. The history and proceedings of these congresses reveal in some measure the progress of an old study under the precision imposed by modern science and modern needs. The record of the many resolutions dealing with cartography gives a strong impression that the map is the essential foundation upon which geography is built. It is therefore significant and interesting to note that the International Map of the World owes its inception to a suggestion made by Dr. Penck at Berne in 1891. The congress at Geneva in 1908 unanimously accepted various principles for its construction and prepared the way for the International Conference on the Map of the World which met in London in 1909; followed, after the Rome Congress in 1913, by a further Conference in Paris, when the Map was definitely standardised.

THE various sections into which each geographical congress has divided its proceedings reveal the width no less than the depth of geographical study. Nevertheless, the great guiding principle has been repeatedly enunciated. Fr. Alexis defined it at Paris in 1875 thus: "L'objet de la géographie est double: en premier lieu, la connaissance de la configuration naturelle de la surface terrestre, considérée en elle-même (géographie physique); en second lieu, l'étude du rapport de la Terre avec ses habitants (géographie politique, ethnographique, économique, etc.)." Sir Charles Close, in concluding his survey of the congresses, states: "The general aim is clear; by travel, by exploration, by the apparatus of maps, by detailed investigations, by the study of historical records, to learn all we can about the Earth, considered especially in its aspect as the home of man."

THE problem of crime is of more than biological interest, but it has its biological side, and Dr. Charles B. Davenport discusses this in the *Journal of Heredity* (vol. 19, No. 7, 1928), under the title "Crime, Heredity, and Environment." From the biological point of view, the important element in criminal behaviour is the failure of the individual to meet the requirements of the mores, that is, the conventional rules of behaviour, which differ in different countries. Such failure is due neither wholly to lack of suitable training nor wholly to heredity, but nevertheless behaviour

depends upon the constitution of the individual criminal, and training, in order to be effective, must not be of a general miscellaneous kind, but must take cognisance of the special make-up of the individual. Dr. Davenport's first step in combating crime would be the prompt and painful punishment of the criminal, for this is not only a physical deterrent, but also, from the obvious sequence of cause and effect, it strengthens the weak inhibitions characteristic of most criminals. As a second step our author would study the individual to find out the particular trait of his character that has made the particular criminal act possible, in order to see whether anything can be done to correct that condition.

WE are of opinion, however, that Dr. Davenport has overlooked the very first necessity in combating crime, and that is the certainty of detection: first catch your criminal. On one occasion we discussed the problem with one of the best known of Scottish judges, who has studied the problem in America as well as from the Scottish bench, and his reasoned conclusion was that the amount of serious crime increases in proportion with the probability of eluding detection and escaping the consequences. The extraordinary number of serious crimes in proportion to the population of the United States as compared with those in Great Britain has to be read, he held, in the light of the high percentage of detection and subsequent punishment in the latter, in contrast with the high percentage of total escape, or escape from adequate punishment, in the United States.

THE Forest Products Research Laboratory, instituted at Princes Risborough under the auspices of the Department of Scientific and Industrial Research, has already been alluded to in NATURE. The investigations now being carried on are an outcome of the wholesale felling of woods in Britain during the War, the threatened shortage of supplies, and the waste in utilisation. The primary purpose of the laboratory is therefore to promote the more economical use of timbers by the wood-using industries of the country. This object can be attained through a knowledge of the strength factors of various timbers and grades of timber, by better seasoning, and so forth. A small pamphlet has recently been issued from the Laboratory on "The Uses of Home-Grown Timbers." This brochure has been compiled by a Committee representative of the Land Agents' Society, the Federated Home-Grown Timber Merchants Association, the Royal Institute of British Architects, and the Forest Products Research Laboratory. The investigations of the committee are of interest since they revealed three facts: (1) that architects in Great Britain usually specified for foreign timber owing to the variety of choice and the certainty of supplies; (2) apart from building operations, there were a great many outlets for home-grown timbers: with a closer knowledge of their properties a larger demand might be expected; (3) that this demand will be increased by the more careful seasoning and grading of the home-grown product. It is recognised that more scientific forestry methods are necessary for the production of straight clean timber free from knots, and that better facilities

for marketing would be obtained by the concentration of woods in large compact blocks. The greater part of the pamphlet is devoted to a schedule dealing with the most important of the home-grown timbers. Each timber dealt with is briefly described, and the demands for it are classified under the following five heads: (a) When the British timber is more often used; (b) when the foreign timber is more often used; (c) when both are more or less equally used; (d) when the British timber is more suitable; (e) when the foreign timber is more suitable.

PERHAPS one of the most important items in the programme of work which is being undertaken by the Forest Products Research Laboratory is a comprehensive study of the mechanical and physical properties of home-grown and imported timber. It is proposed to publish the results of these investigations as data become available and the lines of work are based on those already established and in use in similar laboratories in India, Canada, and the United States. In a recently published pamphlet entitled "Project 1, Mechanical and Physical Properties of Timbers—Tests on Small Clear Specimens," a detailed account of the methods employed in such investigations is given, together with a definition of the principal technical terms. The compilers of the pamphlet correctly say that much of this will be known to fellow investigators, especially in connexion with the standardised tests on small clear specimens. The main principle, which is clearly indicated in the pamphlet, is that a common standardisation of tests and standardised specifications have been adopted by India, Canada, and the United States; and the laboratory at Princes Risborough in England has fallen into line with the similar laboratories in the other three countries.

THE eighth annual report of the Council of the Research Association of British Motor and Allied Manufacturers is now available, and contains notes on many valuable papers which have been circulated among its members. Fundamental work on problems relating to springs and ferrous metallurgy in general has been attempted, and large numbers of air filters, manifolds, silencers, brake fabrics, and other motor components have been examined with the view of effecting improvements in design or to increase resistance to wear. It is to be regretted that the activities of the Association are hampered by lack of support of the industry, which by a voluntary levy of 6*d.* per motor vehicle could produce annually a sum much in excess of the subscription income of £4200 which was necessary under the conditions recommended by the Department of Scientific and Industrial Research to make the Association eligible for a grant.

IN celebration of the tenth year of the existence of Czechoslovakia, an exhibition of contemporary culture and scientific achievement has been arranged at Brno, in Moravia, and will remain open until the end of October. The exhibition is designed to show the progress made during the country's brief existence. The scientific and general studies conducted in different

types of schools, institutes, and colleges are portrayed, culminating in the research exhibits from the science faculties of the universities and from special research associations. The great increase in the number and circulation of cultural periodicals, the production of books, and the number of libraries opened, afford a striking testimony to the progress made. The undertakings of governmental ministries and transport developments are also intimately connected with this cultural progress, and whilst new railways have been laid, air services opened, postal, telegraphic, and telephonic communications improved and extended in remote areas, much still remains to be completed, and such work already in hand is depicted as though it stood, like an artist's unfinished picture, upon an easel.

The Brno exhibition is arranged to show the close interrelationship between the State, the sciences, and general culture. The spread of ideas through the receipt of foreign journals and news is expressed by a long aisle, the white walls of which have dark lines to represent railway tracks. The engineering difficulties encountered in duplicating lines in poorly served areas have brought together specialists in different branches of pure and applied science, and such connexions are cleverly indicated. Other links, such as that of the Ministry of Health with the radium exhibit from Jáchymov and the products from other curative spas, are emphasised. The recent growth of towns, urbanism, is depicted by statistical designs among small-scale apparatus illustrating the latest methods in purifying water supplies, generating electricity, etc. Sciences concerned with inanimate matter and those which are observational and descriptive occupy the ground floor; the mathematical sciences are above, whilst the philosophical studies are placed still higher. Architecturally the main hall is a surprise of impressive spaciousness. The graceful parabolas of concrete admit a maximum of light; smaller surrounding pavilions contain exhibits of the public works of important towns and the arts sections of culture.

THE reports of the council and director of the Norman Lockyer Observatory for the year ended Mar. 31, 1928, show that, in spite of exceptionally unfavourable weather, the useful work which this institution has been carrying on for several years past has been well maintained. With the exception of an expedition (ruined by clouds) to Richmond, Yorkshire, to observe the total eclipse of the sun in June 1927, there has been little variation in the former programme of work, the main features of which are the classification of stellar spectra from original observations, the determination of spectroscopic parallaxes, particularly of early-type stars, and the special study of certain bright-line hydrogen stars. Considerable repairs to the observatory buildings have been carried out, and the equipment has been increased by the addition of some good lenses, which have been purchased at a low figure. Unfortunately the financial position of the observatory is not so favourable as might be desired, the

accounts for the year showing a deficit of £55 2s. 9d. It has been necessary to reduce the scholarship grant from £150 to £100 per annum. The income is still largely dependent on special donations and subscriptions, and it is greatly to be hoped that increased help will shortly be forthcoming so that the very valuable work which the observatory performs may be carried on without the embarrassment of inadequate financial means.

MR. L. A. REDMAN, the author of "The Einstein Delusion and other Essays," in a communication to the editor, objects to two passages in the short notice of his book in NATURE of June 23 (vol. 121, p. 979), namely, (1) "scarcely any reference is made to the original publications of Einstein and his successors," and (2) "other topics, mainly mechanical." The second objection is due to a misunderstanding of the term 'mechanical,' which in the notice is used in the wider sense 'pertaining to mechanics' (cf. "Chambers's Dictionary"); 18 of the 24 "other topics" can be included under this head. As regards the first objection, the title chosen by Mr. Redman for his book clearly points to the first essay as by far the most important in his own estimation; in fact, most of the others deal with problems familiar to students of mechanics and call for no special mention. The first essay contains 43 references of all degrees of importance, including a score or more to popular books, 8 to Einstein's popular (*gemeinverständlich*) tract on "Relativity," 4 to Eddington's "Space, Time, and Gravitation," 5 to various experimental papers, and 4 to the writings of Prof. Poor. There is no reference whatever to the *original papers* of Einstein himself, nor of Poincaré, Minkowski, Weyl, Levi-Civita, to mention only a few of his successors, and none to any authoritative treatise later than Eddington's "Space, Time, and Gravitation," not even to his "Mathematical Theory of Relativity."

THE International Federation of Intellectual Unions (*Internationaler Verband für kulturelle Zusammenarbeit*) announces a fifth congress to be held in Prague on Oct. 1-3. Lectures and discussions will centre round the theme "The Elements of Modern Civilisation." Among expected speakers are A. Fontaine of the Bureau International de Travail, Geneva, the architect le Corbusier, the psychoanalyst Jung, and the sociologist De Man. The first congress was at Paris under the presidency of Borel; since then the Federation has met in Milan, Vienna, Heidelberg, and Frankfurt. As now organised, the Federation is based on unions in Germany, Austria, Belgium, Spain, Esthonia, France, Hungary, Italy, Poland, Roumania, and Czecho-Slovakia. It is officially registered with the International Institute of Intellectual Co-operation in Paris. There is still no formally affiliated British union, but contact has been made with the Information Service on International Affairs, 10 St. James's Square, London, S.W.1, and Mr. Denis Buxton, of 43 Campden Hill Square, London, W.8, is one of the five members of the permanent committee. Applications for membership and for more detailed

programmes should be made to the secretary of the Federation, Prince Charles de Rohan, Wien IV., 18 Rainergasse, Austria. The objects of the Federation include the fostering of personal relationships among the 'intelligenza' of Europe by opening correspondence with distinguished foreigners, by personal introductions, and by hospitality to strangers, especially those on professional errands. Any efforts to reconstruct European society may be welcomed. The history of international societies indicates that a definite aim and open adhesion have been conditions of lasting success.

LIEUT.-COLONEL J. T. C. MOORE-BRABAZON has accepted the invitation of the Council to become president of the Junior Institution of Engineers in succession to Sir Murdoch MacDonald. His induction will take place at a meeting to be held at the Royal Society of Arts on Friday, Dec. 7, when he will deliver his address.

WITH reference to the academic and other honours which distinguished the career of the late Viscount Haldane, it is noteworthy that he was elected to the fellowship of the Royal Society in November 1906, and thus whilst a commoner. Also, the date coincides with the election of the late Edward Cecil Guinness, Earl of Iveagh, both being specially selected for inclusion in the Society's ranks on the ground of services to the cause of science. It is of interest to recall that the above nominations were made during the presidency of Lord Rayleigh (1905-1908).

IN connexion with the forthcoming British Industries Fair (1929), we are informed that the space already taken in the Scientific Instrument Section is 6520 square feet, and 56 firms are participating. Thus the figures for the 1928 Fair, namely, 5990 square feet and 52 firms, have already been exceeded. The total space for the whole of the British Industries Fair at present allotted is 211,000 square feet, and 781 firms are taking part.

As in previous years, during the forthcoming winter, Mr. H. V. Garner, the guide demonstrator of the Rothamsted Experimental Station, and other members of the staff, will be able to give a few lectures to Chambers of Agriculture and Horticulture, Farmers' Clubs, Farm Workers' Associations, Agricultural Societies, etc., on the Rothamsted experiments. No fee will be charged for the lecturers' services, but any association engaging them would be expected to defray their travelling and hotel expenses and to make such arrangements for the lectures as may be necessary. All communications regarding lectures should be addressed to the Secretary, Rothamsted Experimental Station, Harpenden, Herts.

THE Palæontologische Gesellschaft is to meet this year in Budapest on Sept. 26-29, and the meeting will be followed by excursions lasting until Oct. 5. The complete cost is estimated at 12 shillings a day. Communications are promised by K. Beurlen, T. Edinger, K. Ehrenberg, K. Lambrecht, A. Liebus, R. Richter, and O. H. Schindewolf. Details can be

obtained from "Direktion der Kgl. Ung. Geologischen Anstalt, Budapest VII, Stefánia-út 14."

It was reported recently in the daily press that the late Count Vigyazo had bequeathed his estate, valued at more than two million pounds, to the Academy of Sciences at Budapest. The secretary of the Academy, in reply to an inquiry, informs us that the value of the bequest has not as yet been fully assessed, and that it is uncertain when the Academy will be able to enter into possession in view of the fact that several legal actions are still undecided, and the Count's title to certain parts of his possessions is being contested. The revenue of the estate would be used by the Academy exclusively for scientific and national purposes.

THE entire issue of *Die Naturwissenschaften* for June 1 is devoted to a summary of the results of a dozen recent researches carried out in the Kaiser Wilhelm Institute—in experimental embryology, on the cerebral cortex, and on various physical and chemical problems—and to records of the principal activities of the Kaiser Wilhelm Gesellschaft from April 1927 to March 1928, including the reports of the various Institutes. The reports afford striking evidence of the scientific energy and enterprise of the Institutes.

VOLUME 20 of the Collected Researches of the National Physical Laboratory has 444 pages, and includes 30 memoirs published in the years 1920–1927 dealing with questions of an optical character. Of these memoirs, Mr. T. Smith, the head of the Optical Division, is responsible for 13, which deal with the properties and defects of the component parts of optical instruments. Mr. Guild is responsible for 8, mainly concerned with colour measurement, and Dr. Walsh for 4 dealing with problems of photometry. A short abstract precedes each memoir, so that the reader may quickly make himself acquainted with its object

and results. Any reader who does so must be impressed with the great value to the various branches of the optical industry of the work which has been done at the Laboratory during the period covered by the volume.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—An assistant bacteriologist at the University of Durham College of Medicine, Newcastle-upon-Tyne—The Registrar, University of Durham College of Medicine, Newcastle-upon-Tyne (Sept. 22). An agricultural economist at the North of Scotland College of Agriculture—The Secretary, North of Scotland College of Agriculture, 41½ Union Street, Aberdeen (Sept. 22). A part-time woman demonstrator in chemistry in the Household and Social Science Department of King's College for Women—The Secretary, King's College for Women, Campden Hill Road, W.8 (Sept. 25). An assistant conservator of forests under the Department of Agriculture and Forests of the Sudan Government—The Controller, Sudan Government London Office, Wellington House, Buckingham Gate, S.W.1 (Oct. 6). Male assistant superintendent of traffic (Class II.) in the London Telephone Service, and male assistant traffic superintendent in the Provinces, G.P.O.—The Secretary, Civil Service Commission, Burlington Gardens, W.1 (Oct. 25). A head mastership of the King Edward the Sixth High School for Boys, Birmingham—The Secretary, King Edward's School, Birmingham. Evening lecturers in structural engineering and graphics, structural steelwork design, and reinforced concrete design, respectively, at the Borough Polytechnic Institute—The Principal, Borough Polytechnic Institute, Borough Road, S.E.1. An assistant wireless engineer for the Public Works Department of the Government of Hong-Kong—The Crown Agents for the Colonies, 4 Millbank, S.W.1 (quoting M/943).

### Our Astronomical Column.

METEORS AND METEORITES.—The *Nineteenth Century* for September contains an interesting article by Mr. A. R. Hinks on meteors and meteorites, suggested, as he says, by Prof. Olivier's recent book on the subject. The book regards large and small meteors as members of the same class, but Mr. Hinks gives reasons for his dissent from this view. He recalls with approval Sir Robert Ball's suggestion that the larger meteors may have been expelled from terrestrial volcanoes in long past ages. Their orbits would continue to lie near that of the earth, so that an eventual return to it would not be improbable. He also regards as inconceivable the idea that meteors of the complicated 'plum-pudding' structure could have originated either in the sun or in interplanetary space; they must have been formed on some planetary body, and the earth is the most obvious suggestion. His argument might also be used to support Proctor's view that the comets of short period had been expelled from Jupiter and the other giant planets.

Mr. Hinks turns to the masses of iron which are classed as meteoric but were not seen to fall; he notes that five-sixths of them were found in America and Australia, whereas the recorded falls are in a majority in the old world. He explains this by supposing that most of these masses have never left the earth, but were, like the others, the products of volcanic activity.

Their distribution may either indicate greater volcanic activity in certain regions in early times, or climatic conditions more suitable for the preservation of the meteors. The article also deals with cometary physics, and points out the inadequacy of mutual friction of particles to supply the violent expulsive force that was demonstrated to exist in the envelopes of Morehouse's comet; no solution of the difficulty is arrived at.

THE ORBIT OF ZETA HERCULIS.—This star has been a favourite object for double star observers owing to its short period and the brightness of both components. It has now completed three revolutions since discovery, and materials exist for a very accurate orbit. It is discussed very fully by E. Silbernegel in *Astr. Nach.* 5578. He studies the systematic errors of the observers. His final period is 34.417 years, the eccentricity being 0.455 and the semi-major axis 1.349". There is some evidence of a progressive movement of the node of 1° in 10 years. Adopting a parallax of 0.100", the masses of the components are 1.35 and 0.73 of the sun's mass. The diameter of the principal star is given as 2½ times the sun's, its density one-tenth of the sun's. Some people have suspected an invisible companion from supposed irregularities in the motion; the author does not think that the evidence requires this.