

Kendall and Davison describe as a universal notation covering inorganic and organic chemistry and the chemistry of ions, free radicals and transition complexes ("Chemical Ciphering." Pp. 46. London: Royal Institute of Chemistry. 4s. net). The claims are thus even larger than those of Dr. Dyson, and a logical proof of the validity of the ciphering is appended, given the definition of a chemical species as a set of atoms individually stated, in which given pairs of these atoms are linked together by directed bonds and the net charge of the set, and of any discrete ions contained in it, are specified. The authors claim, moreover, that the system is expressed in the language of "basic chemistry", and in accord with modern trends in the theory of molecular structure. Whether the system can be mastered by a chemist in about an hour, as they also claim, is at least doubtful; and if they under-estimate the intellectual effort required to comprehend and apply their system, they have probably also under-estimated the willingness of chemists as a body to make such an effort.

That factor has to be weighed against whatever advantages a cipher notation can offer. The crucial question is the reality of those advantages. Is there, for example, any real hope that mechanical methods, such as punched cards, will be sufficiently widely used to justify the considerable financial investment involved. If universal use is probable, what are the real advantages of an entirely new cipher notation over some extension of the Richter-Stelzner formula system, for such purposes? So far as systematics are concerned, what in economic terms are the advantages gained by a new system over the thoroughgoing application, for example, of the International Rules? A large part of the confusion and ambiguity in organic chemical nomenclature is due to the failure to apply those rules systematically and universally, and the very conservatism which has prevented such a relatively simple reform does not encourage optimism about the universal acceptance of systems involving so much larger an intellectual effort as well as a break with past practice.

Nigerian Livestock Mission

THE Secretary of State has sent a mission to visit West Africa to investigate the livestock industry in Nigeria and the Cameroons under British mandate, with particular reference to meat production. The Mission will also engage in discussion where necessary with the authorities of the neighbouring French territories on problems of mutual interest. The leader of the mission will be Sir Frank Ware, formerly animal husbandry commissioner to the Government of India, and the members will be Mr. Thomas Shaw, a director of Messrs. Zwanenberg-Organon, Ltd., and Mr. Gilbert Colville, who has special experience in the breeding-up of African cattle. Arrangements are being made for local officers of the veterinary, agricultural and geological departments to be attached to the mission. The mission will probably pay a further visit to West Africa in February or March to see the country and the cattle at the end of the dry season. During its first visit, the mission is spending a few days in the Gold Coast to discuss problems in connexion with the cattle industry there.

Irrationality of the General Cubic Threefold

REFERENCE has already been made in these columns (*Nature*, March 31, 1945, p. 385) to the proof by Prof. G. Fano, formerly of Turin, of a long-

conjectured and important result in algebraic geometry. It has been known for nearly a century that the plane curve with equation $f_3(x, y) = 0$, where f_3 denotes a cubic polynomial, is in general irrational, that is, its points cannot be set in one-to-one algebraic correspondence with the points of a line; in fact, its co-ordinates are expressible as elliptic functions of a single parameter. In contrast to this the general cubic surface, given by an equation $f_3(x, y, z) = 0$, is rational, and the method of representing the surface biunivocally on a plane was obtained so long ago as 1866. It was thus natural to inquire whether the general cubic threefold, given by an equation $f_3(x, y, z, t) = 0$, is rational or not; the question posed by the Italian geometers some sixty years back long resisted all attempts at solution, and hence became one of the celebrated problems of geometry. In 1942, Fano (then in his seventieth year) at last established its irrationality; from Switzerland, where he was living as an exile, he communicated the discovery to the Pontifical Academy of Sciences, and this, after various delays, has now been published with cognate researches ("Commentationes", 11, 635; 1947). Fano's proof, though conceptually simple, involves considerable detail, and, in fact, marks the conclusion to a long chain of investigations, dating from 1907, when Fano showed that the general quartic threefold $f_4(x, y, z, t) = 0$ is irrational. It is interesting to note that the entire programme of the research was foreshadowed in a communication made to the International Mathematical Congress held at Bologna in 1928; this has now been carried out in all its details.

The Little Ringed Plover in London

IN 1947 little ringed plovers (*Charadrius dubius curonicus*) bred in the London area for the fourth year in succession, and there was a remarkable increase in numbers (*British Birds*, 41, No. 2; February, 1948). Eight nests were found, and four other broods seen. Because of the possibility that at least two pairs changed their sites after disturbance the exact number present is unknown; but there were certainly eleven and possibly fourteen pairs. Although the majority of the birds were again in Middlesex, there was an extension of range to three other counties and first breeding records were obtained for Essex (four pairs), Kent and Berkshire (one pair each). It is probable that the apparent sudden increase from four pairs in 1946 to a minimum of eleven pairs in 1947 is in part due to a lack of observation in previous years. It is curious that the known breeding range in Britain is, so far, restricted to Tring (where it bred in 1938 and 1944) and the London area (where it has bred annually since 1944). This may simply be due to lack of observation in other suitable places.

Turkish Technical Review

THE first issue (dated August 1948) has appeared of the *Turkish Technical Review* (*Teknik Dergi*), a monthly periodical which is claimed to be the first independent journal of that character published in Turkey apart from those coming from State institutions. It consists of forty-eight pages of text, with introductory notes by the Turkish Minister of Transport, by Prof. Tevfik Taylan, president of the Technical University of Istanbul, and the editors. There is an article on modern military tanks, another on jet motors and gas turbines, a description (translation) of a lathe with electronic control, an article (translation) on the application of plastics in chemical

apparatus and a section on textiles. In addition, there are the usual notes, abstracts of technical papers, reviews of books, notes on patents, etc., and the first page of a technical dictionary (English-Turkish-French-German). In each issue of the journal the contents page is to appear in the same four languages, and translations of any particular article will be prepared on request. The address of the new journal is: *Teknik Dergi*, Divanyolu Caddesi No. 16/3, Sultanahmet, Istanbul.

British Museum (Natural History)

THE galleries of fossil reptiles, fishes and plants in the Geological Department of the British Museum (Natural History) will be re-opened to the public on October 11. Most of the skeletons of the larger fossil animals had been dismantled and packed away in 1939, while others which could not be moved suffered damage during the War. The re-assembling and repair of all these specimens is still in progress; but the work is now sufficiently advanced to permit visitors to see once more the dinosaurs, the plesiosaurs and the ichthyosaurs. In the fossil fish gallery there is a series of dioramas of the fish-life of various geological periods from the Devonian onwards, and in Gallery VII there is a special exhibit illustrating the early history of palaeontology. The rearrangement of the fossil plant gallery is not yet complete, but the student will find an adequate series of specimens exemplifying the plant life of the past.

Lighting Exhibition at the Science Museum

MANY of the exhibits in the "Darkness into Day-light" Exhibition at the Science Museum, London, which closed on October 6, were contributed by the Electric Lamp Manufacturers' Association; these have now been handed over to the Museum for incorporation in the permanent collection on illumination which is being re-modelled. The objects range from six dioramas illustrating the development of domestic lighting from medieval to modern times to a complete historical survey of the development of the fluorescent lamp. In addition, there is a working model illustrating stage lighting, many experimental and newly introduced types of lamp and several interesting demonstrations. The new illumination section of the Science Museum is being built in three sections. In the first, historical portion, the aim is to give a picture of the sequence in which lighting developed from prehistoric to modern times by a series of well-lit exhibits interspersed with a series of dioramas. The second section, most of which is in existence, illustrates by means of push-button demonstrations the principles upon which good illumination depends. The final section will be devoted to modern developments in discharge tubes and fluorescence. It is hoped to open the new section to the public early next year.

Navigation through the Ages

THE Institute of Navigation (c/o Royal Geographical Society, 1 Kensington Gore, London, S.W.7) is organising, with the Royal Geographical Society, an exhibition of "Navigation through the Ages", to be held during December 17-January 20. The exhibition will be opened by the Duke of Edinburgh, and in connexion with it there will be three meetings of the Institute: "Radio and Position", by Sir Robert Watson-Watt (December 17); "The Navigator's Story", by Prof. E. G. R. Taylor and Prof.

W. M. Smart (December 20); three films on radio systems, with a commentary by R. F. Hansford (January 10).

University of London: Appointments

THE following appointments in the University of London have been announced: Prof. L. Dudley Stamp, professor of geography at the London School of Economics and Political Science since 1945, to the University chair of social geography tenable at the School; Mr. J. V. Dacie, to the University readership in hæmatology tenable at the Postgraduate Medical School of London; Dr. C. L. Foster, to the University readership in biology tenable at St. Mary's Hospital Medical School.

Irish Chemical Association

AT the annual general meeting of the Irish Chemical Association, held in Dublin on September 22, the following officers and Council for the 1948-49 session were elected: *President*, Prof. T. S. Wheeler; *Vice-President*, D. Crowley; *Hon. Secretary*, G. F. O'Sullivan; *Hon. Treasurer*, J. G. Belton; *Council*, Dr. V. C. Barry, Dr. T. G. Brady, Prof. W. Cocker, Prof. T. Dillon, W. V. Griffiths, Miss M. MacNeill, N. V. Nowlan and F. T. Riley. Prof. Wheeler will deliver his presidential address, "The Training of a Chemist", in the Department of Chemistry, Trinity College, Dublin, at 7.45 p.m. on October 20.

Announcements

DR. RICHARD E. SHOPE, of the Rockefeller Institute for Medical Research, has been appointed associate director of the Merck Institute for Therapeutic Research. Dr. Shope is an authority in the field of experimental medicine and is known for his work on the virus of swine influenza. To provide Dr. Shope with special facilities for the study of animal pathology, a new building is being constructed in Rahway, N.J., by the Merck Institute.

DR. W. C. PRICE has been appointed to the University readership in experimental physics tenable at King's College, London, as from January 1, 1949. In 1937 Dr. Price became demonstrator in physical chemistry at the University of Cambridge, and during the War he worked at the Royal Aircraft Establishment, Farnborough, and for the Ministry of Supply and Ministry of Aircraft Production. Since 1943 he has been senior spectroscopist at the I.C.I. Physical Chemistry Research Laboratory, during which time he spent a session at the University of Chicago as research associate.

THE third commemoration day lecture at the Imperial College of Science and Technology will be delivered by Prof. Herbert Dingle on October 25. The title of Prof. Dingle's lecture will be "Some Reflexions on the History of Science".

MR. LEONARD CUNDALL, senior geography master at the Henry Thornton School, London, has been appointed a lecturer in the Department of Education of the International Wool Secretariat. He will lecture on wool to schools and adult educational bodies in the north of England and Scotland. Mr. Cundall, who graduated at the University of Leeds, has been chairman of the Secondary Schools' Standing Committee of the Geographical Association and of the Committee of the Assistant Masters' Association, which produced the "Memorandum on the Teaching of Geography" including the development of the wool industry in the West Riding.