

News and Views.

AN interesting feature of the proceedings at the anniversary meeting of the Linnean Society on May 27 was the presentation to the Society by Sir David Prain, on behalf of the subscribers, of a portrait of the general secretary, Dr. Benjamin Daydon Jackson. The portrait, by Mr. Ernest Moore, will commemorate Dr. Jackson's long and helpful association with the Society as an officer for a period of forty-six years—a period equal to one-third of the present life of the Society, which was founded in 1788. In 1880 Dr. Jackson, who had joined the Society in 1868, was elected one of the two honorary secretaries, succeeding Mr. Frederick Currey on the botanical side, and as such he continued to serve until 1902, when on the retirement of the assistant secretary, Mr. J. E. F. Harting, he was appointed to the specially created post of general secretary. As general secretary Dr. Jackson has for the past twenty-four years ably administered the Society's affairs, and his knowledge and experience have been invaluable to the successive presidents, secretaries, and councils.

THOUGH he completed his eightieth year on April 3, Dr. Daydon Jackson looks back on an almost unbroken record of attendance at the fortnightly meetings of the Linnean Society during his forty-six years' official connexion with it. Even during his earlier period of service as botanical secretary, Dr. Jackson made the Society his headquarters, and his unrivalled knowledge of the Linnean collections has been at the service of fellows or visitors. Several generations of workers retain a grateful recollection of assistance given with equal cheerfulness to the eminent visitor from abroad or the young student at home. Reference was made to Dr. Jackson's encyclopædic work; the compilation of the "Index Kewensis" was necessarily centred at Kew, but the "Glossary of Botanical Terms" is a product of leisure moments at the Linnean Society, while his "Catalogue of the Linnean Herbarium" is intimately associated with the genius of the place. His reputation as our authority on the work and collections of Linnæus was recognised at the Upsala celebrations in 1908 by the conferment of honorary degrees (Ph.D. and A.M.) and a royal honour (R.N.O.). Dr. Jackson will continue his association with the Linnean Society as Curator of the Linnean Collections; in this capacity his services will still be available to workers, and it is hoped that he may find ample leisure for putting on record more of his great knowledge on Linnean matters.

THERE is some risk that expectations not likely to be justified are being founded on the recent discovery of fresh foot-and-mouth disease carcasses as a source of outbreaks of foot-and-mouth disease. All those who have had to give serious consideration to the introduction of the disease from abroad in recent years have recognised importation of entire carcasses or portions of carcasses of animals slaughtered while affected with the disease as a clear possibility. In spite of this, very great quantities of chilled or frozen beef are introduced from foreign countries,

including Argentina, in which foot-and-mouth disease constantly exists. There was reason, however, to think that that could not be a very fruitful source, because the virus of the disease would probably have lost its vitality in the carcasses by the time they arrived here.

WHAT makes fresh, unpreserved meat from Belgium and Holland particularly liable to start an outbreak of foot-and-mouth disease is that it may arrive in Great Britain within 24 or 48 hours after the animals are killed, and would then be certainly infective. That source can be effectively stopped, but it is much to be feared that it will not prevent the recurrence of outbreaks in Great Britain so long as the disease is highly prevalent in the adjacent countries of the continent. It is an important fact that Scotland has for a period of two years been free from foot-and-mouth disease, although it is known that during that period thousands of pigs' carcasses have been imported from the continent. Besides, the disease was frequently introduced before the present practice of killing pigs and dispatching their fresh carcasses immediately had been begun. The real risk lies in the fact that every person or thing that has been in contact with an animal affected with foot-and-mouth disease, or in a place where diseased animals have recently been kept, becomes capable of spreading the disease for a period that may last for some days at least, and may therefore cause an outbreak on arrival in Great Britain after the comparatively short journey from Belgium and Holland.

THE address delivered to the Iron and Steel Institute by Sir Peter Rylands, which appears elsewhere in this issue, is an exceedingly illuminating one, and the chart showing the facts concerning the production of steel in different parts of the world is very striking. That the fraction of the world's production contributed by Great Britain is a diminishing one is, however, inevitable in view of the vast resources of easily accessible and chemically suitable ores and fuel possessed by the United States, and of the entry of other countries, having natural resources of an extensive kind, into the field of production. It would be of interest to see a similar chart in which the value of the steel produced was shown instead of the tonnage, when perhaps the British share would prove to be somewhat larger, on account of the position occupied by Great Britain as a producer of the highest classes of steel. Sir Peter Rylands rightly emphasises the importance of organisation to the industry, and attributes much of the success of American and German undertakings to the industrial organisation which has improved efficiency. On the scientific side, the British steel industry is already responsible for the conduct of a large volume of research work, but much more thorough co-operation is required in order that the fruits of research may be made available to the industry as a whole. Nowhere is the influence of purely scientific investigations on manufacture to be more clearly seen than in the

steel industry, except perhaps in the electrical industry, in which the necessity of co-ordinating scientific knowledge with practice has been recognised to the fullest extent.

IN the course of his lecture on "Iron in Antiquity," delivered at the Royal Institution on June 3, Dr. J. Newton Friend referred to some interesting historical points as to the early use of metals. Native gold was known to man at a very early date and was highly prized on account of its intrinsic beauty and resistance to tarnish. Native copper and iron were also known in certain districts, but it was centuries later before man learned to reduce those metals from their ores. Iron was manufactured in the Near East at an early date. About 1300 B.C. the Hittites were beginning to use iron weapons for military purposes, and in a letter, thought to have been addressed to Rameses II. of Egypt, the Hittite king states that he is sending with the letter an iron dagger. The Romans, in late years, were skilled metallurgists. Virgil in his "Aeneid," written about 40 B.C., describes the smithy in full work, whilst Pliny, whose work on natural history appeared in A.D. 77, shows a considerable knowledge of iron ores and of the working of the metal. He appears also to have recorded the accidental formation of cast iron. An iron ring of Roman origin, probably the remains of a ferrule, was found recently at Uriconium, and appears to have been made by bending a strip of iron into the form of a ring and soldering the ends with some copper alloy. Cast iron was known in Sussex about 1350, and soon became quite a common product. It was at first used exclusively for casting purposes, and in 1588 cast-iron guns were used, as well as bronze, by the Spaniards in their Armada. When, many years later, it was found that cast iron was the most suitable starting-point for the manufacture of iron and steel, the demand for it increased enormously. In 1800 the United Kingdom produced about $\frac{1}{4}$ million tons of pig iron, a quantity that had increased by 1913 to more than 10 million tons, but fell again to just over 6 million tons in 1925.

It is possible that the activities of the Russians in the scientific exploration of northern Siberia may be strengthened by the co-operation of Norway. It is reported in the *Times* of June 3 that a conference has been held in the Soviet Legation at Oslo under the presidency of Dr. Nansen to consider the possibility of a joint Russian and Norwegian expedition to Yakutsk. The conference was attended by representatives of the University of Oslo, the Geographical Society, and the Foreign and Commercial Departments. The Russian Academy of Sciences was represented by Dr. Wittenberg. It was stated that there are at present sixty Russian men of science engaged in investigation in Yakutsk. This area is one of special interest, particularly to the anthropologist, on account of the light which investigation of its people may throw on ethnology and racial movement in Asia. Any investigation of the people and culture of Russian territory in Asia, however, and especially the investigation of its archaeological

remains, is of interest to a wide circle outside Russia. Any attempt, therefore, to strengthen Russian effort by interesting scientific workers of other countries in these investigations deserves careful and, where circumstances permit, sympathetic consideration.

MANY interesting facts relating to the early manufacture of glass were mentioned by Sir Flinders Petrie in the course of an address delivered at the annual meeting of the Society of Glass Technology held at University College, London, on June 1. Glass was produced in the Euphrates region and in northern Mesopotamia so long ago as 2500 B.C., but in Egypt all glass was imported until 1500 B.C. Fifty years after the introduction of Syrian workers into that country, however, it became one of the commonest of all objects. Glass beads, the most popular use of glass, were not then made from liquid glass but from glass paste, glass-blowing not having been introduced until the Christian era. Sir Flinders, in referring to the use of glass by the ancients for the purpose of weights, said that three glass weights of the same denomination which had been found proved on testing to agree within $\frac{1}{100}$ of a grain.

AN organisation similar to Science Service of Washington, for the purpose of supplying to the press readable and accurate knowledge of scientific progress, has been formed in Paris under the title of "Office d'Information scientifique et technique," at the instigation of M. le duc de Gramont. The board of control consists of J. L. Breton, director of the National Office of Scientific and Industrial Research and Inventions; Charles Fabry, professor at the Sorbonne; Armand de Gramont, president of the council of the Institute of Optics; Paul Janet, director of the École supérieure d'Électricité; Louis Lumière, of the Academy of Sciences; Louis Mangin, director of the Muséum national d'Histoire naturelle; Émile Picard, permanent secretary of the Academy of Sciences; Georges Roger, of the Academy of Medicine; Émile Roux, director of the Pasteur Institute. The director of the office is Lieut.-Col. J. Raibaud. The new institution will co-operate with Science Service of Washington in the exchange of news of scientific and industrial progress in France and the United States.

SOME interesting side-lights were thrown on Indian religious custom and medical practice in Sir J. C. Bose's lecture on the action of cobra venom on plants which was delivered before the Royal Society of Medicine on June 2. Sir J. C. Bose found by experiment on animals and plants that a moderate dose of cobra venom produced an arrest of the pulse before death. In Indian popular belief it was thought that when a person bitten by a snake exhibited signs of death, revival was possible. For this reason the body was not cremated but was placed on a raft and allowed to float down the river. *Shuchikavan*, of which an ingredient is a minute quantity of cobra venom, has been employed in Indian medicine for a thousand years when a patient is at the point of death from heart failure. It is believed to revive the failing activity of the heart.

He had found that minute doses of cobra venom also stimulate certain nervous activities of plants.

THE annual conversazione of the Royal Society to which ladies are invited will be held in the Society's rooms on Wednesday, June 16, at 8.30 P.M.

THE annual visitation of the National Physical Laboratory, Teddington, will take place on Tuesday, June 22.

SIR DUGALD CLERK, K.B.E., well known for his work on the development of the internal combustion engine, has been elected Prime Warden of the Goldsmiths' Company.

THE Ross Institute and Hospital for Tropical Diseases, Putney Heath, London, S.W. 15, will be opened by the Prince of Wales on July 15. The Government of Nigeria has given a sum of 1000*l.* to the Institute to mark its appreciation of the services rendered by Sir Ronald Ross to residents in the tropics by his researches into the causation of malarial fever.

AT the forthcoming Oxford meeting of the British Association, August 4-11, Prof. A. S. Eddington will deliver an evening discourse upon the subject of "Stars and Atoms," and Prof. H. F. Osborn one on "Discoveries in the Gobi Desert by the American Museum Expedition." Public lectures will also be given in Oxford by Sir William Bragg, Sir Dugald Clerk, Capt. Eckersley, Prof. Julian Huxley, and Prof. P. F. Kendall.

IT is announced in *Science* that the Willard Gibbs Medal of the Chicago section of the American Chemical Society has been awarded this year to Sir James Colquhoun Irvine, of the University of St. Andrews. The presentation will take place at the September meeting of the Chicago section of the Society, when Dr. Irvine will be attending the Philadelphia meeting of the American Chemical Society.

THE following have been elected officers of the Manchester Literary and Philosophical Society for the ensuing year: *President*, Dr. H. Levinstein; *Vice-Presidents*, Prof. W. L. Bragg, Prof. H. B. Dixon, Mr. E. A. Eason, Dr. R. S. Willows; *Secretaries*, Mr. John Allan, Prof. W. H. Lang; *Treasurer*, Mr. R. H. Clayton; *Librarians*, Mr. C. L. Barnes, Dr. Wilfrid Robinson; *Curator*, Mr. W. W. Haldane Gee.

IT is expected that the *Proceedings of the Optical Convention* will be published not later than August 1 next, and that they will therefore be available during the meeting of the British Association at Oxford. Owing to the large number of papers read at the Convention, and the consequent size of the Proceedings, it has been found necessary to increase the price, which is now fixed at 30*s.*, plus 9*d.* postage, instead of 25*s.* as previously announced. Orders should be addressed to the Secretary, The Optical Convention, 1926, 1 Lowther Gardens, Exhibition Road, London, S.W.7.

AN exhibition of Tardenoisian and pygmy types of stone implements is being held (June 8-22) at the Royal Anthropological Institute, 52 Upper Bedford Place. The exhibits will form a very fairly repre-

sentative collection of the microlithic industry such as, we understand, has not hitherto been gathered together. Specimens will be included from Northumberland, Yorkshire, East Anglia, the south of England, Cornwall, Somersetshire, and Wales, France, the Fayum, Mesopotamia, East Africa, India, and Sydney, N.S.W. The exhibition is open to all fellows of the Institute; those who are not members may obtain admission on presentation of a visiting-card.

ACCORDING to a statement of the Berlin correspondent of the *Times* in the issue of June 3, a public Marriage Advice Bureau has been opened in Berlin under municipal auspices and with the support of the Prussian Minister of Social Welfare. It will conduct free medical examination of those about to marry. Advice will be given in those cases where hereditary or acquired disease seems to make postponement or renunciation of marriage advisable. The services of the Bureau are to be available also for those already married.

THE Council of the Institution of Electrical Engineers has made the following award of premiums for papers read during the session 1925-26, or accepted for publication: The Institution Premium to Mr. L. C. Grant; Ayrton Premium to Mr. S. Mavor; Fahie Premium to Messrs. B. S. Cohen, A. J. Aldridge, and W. West; John Hopkinson Premium to Mr. S. Ferguson; Kelvin Premium to Mr. P. Dunsheath; Paris Premium to Mr. T. Carter; Extra Premiums to Prof. S. P. Smith, Messrs. J. L. Thompson and H. Walmsley, Dr. A. B. Wood; Wireless Premiums to Messrs. R. A. Watson-Watt and J. F. Herd, Mr. J. Hollingworth, Dr. R. L. Smith-Rose, and Mr. R. H. Barfield.

THE Wellcome Historical Medical Museum, 54A Wigmore St., London, W.1, which has been temporarily closed for alteration and reorganisation, was partially re-opened on June 1. The work of reorganisation is still proceeding, and when completed the arrangement and classification of the collections will be systematised, and the objects made more accessible for inspection and study. The Museum is open to members of the medical profession and research workers generally from 9 A.M. to 6 P.M. on week days, except Saturdays, when the Museum is closed at 1 P.M.

AT the recent annual meeting of the Iron and Steel Institute, the following awards of Carnegie scholarships were announced: Mr. F. H. Arnfelt (Stockholm), 100*l.*, for research on iron aluminium alloys; Mr. V. N. Krivobok (Pittsburg), 100*l.*, for a study of recrystallisation of metals after cold-working; Mr. A. G. Lobley and Mr. C. L. Betts (Great Britain), 100*l.*, for an investigation on the viscosity of iron and steel at high temperatures; Mr. A. R. Page, 100*l.*, to enable him to carry out research on the hardening and tempering of high-speed steels; Mr. Tibor Ver (Budapest), 100*l.*, to study the effect of alternating stresses on the structure and mechanical properties of metals; Mr. L. B. Pfeil (Swansea), 100*l.*, to continue his investigation on the growth and properties of single iron crystals; and Mr.

J. H. Partridge (Birmingham), who received 100*l.* in 1925 in aid of a research on the electrical and magnetic properties of cast iron, a further award of 50*l.* to enable him to continue the investigation.

THE Council of the Institution of Civil Engineers has made the following awards in respect of papers read and discussed at the ordinary meetings during the session 1925-1926:—A Telford Gold Medal to Mr. O. L. Prowde (Makwar, Sudan); a Watt Gold Medal to Mr. H. R. Lupton (Leeds); Telford Premiums to Messrs. A. S. Angwin and T. Walmsley (London), V. Bayley (London), C. F. Bengough (Tewkesbury), A. Honeysett (London), J. N. Reeson (Melbourne, Victoria), and H. A. Reed (Manchester); and a Crompton Prize to Colonel G. R. Hearn (Calcutta). The Council has also awarded the Coopers Hill War Memorial Prize for 1925 (consisting of a bronze medal, parchment certificate, and a sum of money) to Mr. E. L. Everatt (Bombay). This prize was founded by the Coopers Hill Society in memory of Coopers Hill men who lost their lives in the War.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—An assistant lecturer and demonstrator in the department of Zoology of the East London College—The Registrar, East London College, Mile End Road, E.1 (June 16). An assistant lecturer in

mathematics at King's College, Strand—The Secretary (June 23). Lecturers in physics and chemistry in the University of Durham—Head of the Department of Pure Science, South Road, Durham (June 26). An assistant for technical records work at the Building Research Station of the Department of Scientific and Industrial Research—The Director, Building Research Station, Garston, nr. Watford (June 26). A principal of the Pibwrylwyd Farm Institute of the Carmarthenshire Agricultural Committee—J. W. Nicholas, County Offices, Carmarthen (June 26). A lecturer in mathematics at University College, Southampton—The Registrar (June 29). An assistant lecturer in chemistry at the Liverpool Central Municipal Technical School—The Director of Education, 14 Sir Thomas Street, Liverpool (July 5). A keeper of the Department of Zoology of the National Museum of Wales—The Director, National Museum of Wales, Cardiff (July 9). A junior scientific assistant for Admiralty Research—The Secretary of the Admiralty (C.E. Branch), Whitehall, S.W.1. A woman resident lecturer in agricultural chemistry and botany at Studley College, Warwickshire—The Principal. An entomologist and research workers able to undertake independent inquiries on malaria, in the field or laboratory—The Secretary, Indian Research Fund Association, Simla, India. A teacher of mathematics and physics at the Wandsworth Technical Institute—The Principal.

Our Astronomical Column.

WOLF'S NOVA OF OCTOBER 1925.—Dr. W. H. Steavenson noted, at the meeting of the British Astronomical Association on May 26, that this object in Aquila increased slightly in brightness during the last two months of 1925, attaining mag. 8.7. Recent observations show that it is still of mag. 9, so that the decline is very slight. He suggested that the object is not a Nova but a normal star which has hitherto been hidden by a nebulous cloud from which it has just emerged. Its behaviour is so unusual that it deserves careful watching. Plates taken a few years ago show no trace of it, though they include stars of mag. 15.

COLOUR STUDIES OF VARIABLE STARS.—*Astr. Nach.* No. 5440 contains a study of certain variables by J. Hopmann; the colour index and bolometric magnitude were deduced at various stages of the light curve. Mira Ceti, when near minimum, became so red that it went beyond the limits of the comparison stars, and only estimates were possible. The last maximum of light occurred 1925, Dec. 7 ± 2 d, about 17 days later than the predicted date. The effective temperature of the star was then found to be 3470° as compared with 3780° at the maximum 11 months earlier. The star was, however, brighter last December than in the previous maximum: visual magnitude 3.20 compared with 3.61; bolometric magnitude 2.92 compared with 3.24. In the case of ζ Geminorum the range of bolometric magnitude is shown to be very much smaller than that of visual magnitude; in fact, the measures as they stand indicate an actual reversal of the curve, but this is not regarded as proved.

PARALLAX SURVEY OF KAPTEYN'S SELECTED AREAS.—Publications of Yerkes Observatory, vol. 4, part 4, contains a photographic determination of parallaxes in these areas (zone $+45^\circ$) by Mr. Oliver J. Lee.

The plan of wholesale photographic parallaxes was suggested by Kapteyn but has not met with general approval. The large scale of the 40-inch refractor is obviously an advantage in this research. Three hundred and ten photographic plates were used, all but nine being taken with a colour-filter; these nine were used mainly for proper motions. The parallax determinations are necessarily only relative. Ten or twenty stars were selected on each plate as standards: they were the faintest stars that had crisp, firm images (average magnitude 12.64), and a preliminary solution showed that they had very little proper motion, so they were presumably distant. The separate parallaxes and proper motions of 1041 stars are printed. The largest parallax is $0.113''$ for a star of mag. 12.8 and proper motion $0.035''$. About 3 per cent. of the stars have parallaxes so large as $0.06''$. As one will expect, there are a large number of negative parallaxes. The effect of magnitude error is discussed and concluded to be small; a few of the plates were taken with a developed negative of the field used as a screen (a plan suggested by Kapteyn, which gives nearly equal magnitudes to all stars), but difficulties were found in working it.

The reduction of the relative parallaxes to absolute ones needs more absolute proper motions than are at present available in the region. Prof. Comstock, in a note included in the article, considers that the relative proper motions deduced need on the average a correction of about $1''$ per century to reduce to the system of Boss.

Diagrams of the distribution of proper motions in the different areas are given; some of these, but not all, appear to conform to the two-drift configuration.

The author finally deduces the probable error of a proper motion as $\pm 0.007''$ and of a parallax as $\pm 0.020''$. He states that his results support the relative nearness of the galaxy in the region of R.A. 21^h.