

1900, 1901, 1905, and these will probably be reproduced.

Fellows of the Royal Astronomical Society will long remember Wesley's readiness to help them in their researches, and to put his intimate knowledge of the society's library at their service. He was an original member of the British Astronomical Association, and served as vice-president for many years; on one occasion he delivered the presidential address in place of the late Mr. Green. A. C. D. CROMMELIN.

PROF. C. MICHIE SMITH.

CHARLES MICHIE SMITH, who died on September 27, was born on July 13, 1854, at Keig, Aberdeen. He studied at Aberdeen and Edinburgh, graduating as B.Sc. in 1876. He was appointed professor of physics at the Christian College, Madras, in the same year, and in 1891 became Government Astronomer at Madras. In 1899 he brought out the New Madras General Catalogue of 5303 stars: the low latitude of Madras gives its star catalogues special importance, since they serve to link the northern and southern catalogues.

Michie Smith observed the annular eclipse of 1894, and the total one of 1898 at Saldol, obtaining some beautiful large-scale coronal photographs. He also observed the Leonid meteors in 1899, including 37 of the first magnitude (Mon. Not. R.A.S., vol. 60), and published an extensive record of meteors seen at Madras from 1861 to 1890. He also observed the Zodiacal light, and wrote the article on this subject in the "Encyclopædia Britannica" (9th edit.).

Regular meteorological observations were made at Madras, and in 1893, Michie Smith published those of the years 1856 to 1861. He also contributed papers to the Royal Society of Edinburgh on the eruption of Bandaisan, the determination of surface-tension by measurement of ripples, and on atmospheric electricity and the absorption spectra of vegetable colouring matters. It was under his initiative that the mountain observatory at Kodaikanal was inaugurated in 1899, which has played such an important part in the extension of our knowledge of solar physics. He presided over the two observatories from 1899 till his retirement in 1911, when he was succeeded by Mr. Evershed.

WE regret to announce the death of the eminent scholar and editor, Dr. James Hastings, at the age of seventy-one years. The various Dictionaries of the Bible published under his control have enjoyed much popularity, combining with the orthodox position the results of modern criticism. But his greatest work was the "Encyclopædia of Religion and Ethics," the publication of which began in 1908 and ended with the twelfth volume in 1921. Like all works of the kind, it is uneven, but to the student of comparative religion, ethics and philosophy, anthropology and folklore, it is of the highest value. Hastings was a model editor, quiet and unassuming, sparing no pains to verify a fact or a reference; he maintained the most agreeable relations with his many contributors, some of whom must have tried his patience sorely. His fault, if it be a fault, was excessive kindness and hesitation in using his blue pencil when he was dealing with men who were recognised authorities on the subjects which they undertook. The war, which interfered with his arrangements with foreign scholars, added much to his anxieties, and the work must have come to a temporary end if he had not been generously supported by his publishers. He had planned a general index of the Encyclopædia, which will add much to its value for the working scholar. It is to be hoped that the scheme for the index was drawn up before his sudden, untimely, and much regretted death.

IN the *Chemiker Zeitung* of September 28 the death is announced on September 15 of Prof. F. Nobbe, of the Forestry Academy of Tharandt, the founder of the research station of plant physiology and the first station for seed control.

WE notice with much regret the announcement of the death on October 26, at sixty-six years of age, of Dr. C. G. Knott, reader in applied mathematics, University of Edinburgh, and on October 28, in his eighty-fifth year, of Prof. A. Crum Brown, emeritus professor of chemistry in the same university.

Current Topics and Events.

MUCH anxiety is felt in this country as to the position and prospects of the Royal College of Science, Dublin, under the Irish Provisional Government. By a sudden decree, the college was closed on October 1—a day before the new session would have opened. It was announced that a bomb had been found in the building, and this provided a plausible excuse for the action taken. No students had, however, been admitted to the college since June 30, and the circulation of the rumour as to the discovery of the bomb was known to be merely a means of suggesting that the college was a centre of disaffection and that in the interests of public safety it should be closed. For a week or two afterwards the teaching was carried on in buildings lent by the National Uni-

versity, but a second decree was made on October 16 ordering the students, about four hundred in number, to enter the National University classes, an arrangement against which both professors and students strongly protested. A compromise may be effected, but meanwhile the Royal College of Science is in the complete occupation of the military, and no one in authority will say that the building will be restored to its original purposes when military necessity ceases. It would be nothing short of a calamity if an institution in which so much valuable scientific work has been carried on for many years should have its activities abruptly ended to serve purely political purposes. The college is unique in Ireland; its equipment cost more than 250,000*l.* and no other

institution or university in that country can offer the same facilities for training. It must be heartbreaking to see the practical equipment and apparatus, the fine electric machinery plant, engineering department, and laboratories generally, used for kitchens and bedrooms and at the mercy of military forces unfamiliar with their significance or value. It is almost impossible to get exact information as to the actual position of things in Dublin, but if conditions are half so bad as have been described to us, men of science and scientific institutions should unite to bring them to the notice of their colleagues in other parts of the British Isles and the world of progressive knowledge in general, in the hope that provision for the scientific instruction and research much needed by Ireland will not be curtailed but extended in the near future.

THE Marquess of Crewe has accepted the invitation of the council of the British Science Guild to succeed Lord Montagu of Beaulieu as president of the Guild. Lord Crewe has always taken much interest in the promotion of scientific research, and it was while he was Lord President of the Council in 1915 that the Government scheme for aiding the formation of Industrial Research Associations was announced by him. The British Science Guild is not directly concerned with the methods and results of research in the same way as are the various scientific and technical societies, but with securing adequate facilities not only for extending scientific knowledge itself but also for using it for national progress. Its relation to such societies is similar to that of the Navy League to the navy; and the need of such a body, watching and intervening on behalf of science, and in the interests of administrative efficiency and national development, is as great to-day as ever it was. We understand that the Guild proposes shortly to make a wide appeal for support to extend its activities and to enlighten the general public as to the significance of scientific work and thought in modern civilisation by means of leaflets, lectures, conferences, and so on. The campaign is a promising one, and for the sake of science as well as for national security, we trust it will be markedly successful.

AMONG the scientific men who lived during the Revolutionary Era in France few were held in higher esteem than Claude Louis Berthollet, the centenary of whose death occurs on November 6. Celebrated for his discovery, in 1785, of the composition of ammonia and, in 1786, of the bleaching properties of chlorine, he was one of the earliest converts to the new ideas of Lavoisier, and with Lavoisier, Fourcroy, and Guyton de Morveau, compiled the "Méthode de Nomenclature Chimique." During the Revolution his organising powers were devoted to maintaining a supply of saltpetre for the making of gunpowder, while with Monge and Clouet he did much to improve and extend the manufacture of steel. He also played a prominent part in the reorganisation of the Academies and the inauguration of the National Institute. Like Monge, he was a favourite with Napoleon and was one of the group of learned men who accom-

panied the young conqueror to Egypt. Among Berthollet's writings was his "Statique Chimique," published in 1803. He was the founder of the famous "Société d'Arcueil," of which Laplace, Biot, and Gay-Lussac were members.

THE secretary of the Swedish Medical Society has favoured us with the following particulars of the Anders Retzius medal which was awarded recently to Sir Charles Sherrington. The Anders Retzius foundation was given to the society on October 13, 1896, by Mrs. Emilie Retzius in memory of the hundredth anniversary of the birth of her late husband, Prof. Anders Retzius; and it is intended to promote studies of normal anatomy and physiology. From this foundation the Anders Retzius gold medal was for the first time awarded by the society to Albert von Kölliker in the year 1897. It has since been awarded successively on every fifth year to Carl Voit, Gustaf Schwalbe, John Newport Langley, and Oscar Hertwig, alternately in recognition of their prominent anatomical and physiological researches. The medal is sixty-nine millimetres in diameter, was designed by the Swedish medallist E. Lindberg, and represents Anders Retzius's portrait in profile.

MR. W. FRENCH, writing from the Storey Institute, Lancaster, directs our attention to a letter from Prof. A. C. Seward, published in the *Lancaster Observer* for September 22, referring to the state of the tombstone marking the grave of the parents of Sir Richard Owen and appealing to Lancastrians to contribute the comparatively small amount required for its restoration. Mr. French suggests that there may be many scientific men yet living who owe much of their success and inspiration to the writings and teachings of Sir Richard Owen, and would be willing to acknowledge in part their debt to him by contributing to the restoration of the tombstone of his parents. The estimated cost of the project is about 30*l.*, and Mr. French is willing to receive subscriptions and to give any further information that is required. We feel sure that readers of NATURE will share the desire of Prof. Seward and Mr. French that anything associated with the memory of so distinguished a man of science should be preserved and treated with the greatest reverence.

IT has been announced in our columns (September 16, p. 394) that nearly 850*l.* had been subscribed in this country in support of the Pasteur centenary celebrations. This sum has been forwarded to the general treasurer of the fund, M. Th. Héring, who, in his reply acknowledging the receipt of the gift, states that any surplus of funds remaining after providing the monument at Strasbourg will pass to the Pasteur Foundation, which will probably institute Pasteur prizes for needy students. In February next, the Alliance Française, of 41 Fitzroy Square, W.1, is entertaining for a few days MM. Vallery-Radot, father and son, relatives of Pasteur, and Dr. Pasteur Vallery-Radot will give an address on the work of his illustrious grandfather. MM. Vallery-Radot will afterwards be entertained at dinner, probably at the Vintners' Hall.

IN the *Daily Mail* of October 23 appears a note on the discovery of a human skull and bones in an ancient gold-working at Gwanda, Rhodesia. It is based upon an account of the discovery by Mr. Duncan Simpson, by whom the bones were found in July last. They lay under twenty feet of débris, and their position would suggest that the miner was working on the face of the reef when he was killed by a fall of the rock. This is supported by the fact that a large stone hammer lay near by, which, it may be assumed, he was using at the time. The bones are now in charge of Dr. Arnold of the Rhodesian Museum and are to be submitted to expert investigation. It is stated that on a cursory examination they are thought to be those of a Bantu. If, as the circumstances suggest, the remains are those of one of the original miners of the ancient gold-workings, in which this part of Rhodesia abounds, they are the first to be discovered. The confirmation of their Bantu origin would have an important bearing upon the problem of the origin of these gold-workings and of the highly developed ancient culture of Rhodesia which has so often been the subject of controversy. While it is highly probable that the workers were the slaves of a higher race, as suggested in the *Daily Mail* article, the Bantu origin of these early miners, in view of the comparatively late incursion of that race into this area, would preclude a very high antiquity for these workings.

A SNAP of cold and severe weather was experienced over the British Isles during the closing days of October, and temperatures were exceptionally low for so early in the winter season. Bitter easterly winds were prevalent under the controlling influence of a region of high barometer centred over Iceland and an area of low barometer readings situated over France and the Bay of Biscay. In the English Channel and on our south coasts the east winds attained the force of a gale. Snow fell in Cornwall and at many places in the southern counties on Saturday, October 28. According to the reports from the Meteorological Office, the thermometer on October 28 and 29 failed to reach 50° F. in any part of the Kingdom, whilst on October 29 the maximum at Falmouth, Newquay, Lympe, and Hampstead was only 39° F. and at night sharp frost was generally experienced, the exposed thermometer falling to 20° F. in many places. The Greenwich temperature records from 1841 show that in six years, 1859, 1869, 1873, 1880, 1890, and 1895, the maximum day temperature in October failed to attain 40°, on a single day, at least, subsequent to October 20. At Eastbourne the highest temperature on Sunday, October 29, was 42° F., and on three mornings, October 26, 27, and 29, the lowest temperature in the shade indicated a frost. October was generally cold and fairly dry in most parts of England, with a large amount of easterly wind, and was in marked contrast to the warm and bright weather experienced in the corresponding month of last year.

THE anniversary dinner of the Royal Society will be held at the Hotel Victoria (Edward VII. rooms) on St. Andrew's Day, Thursday, November 30.

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THE annual exhibition of scientific apparatus organised by the Physical Society of London and the Optical Society will be held on January 3 and 4 next.

AT the first ordinary meeting of the new session of the Royal Geographical Society, to be held on November 13 at 8.30 p.m., at the Aeolian Hall, a paper will be read by Commander Frank Wild on the work of the *Quest*.

THE Huxley Lecture of Charing Cross Hospital Medical School will be delivered at the school on Wednesday, November 8, at 3 o'clock, by Sir Arthur Keith, who will speak on "Evolutionary Tendencies in Man's Body." At 4 o'clock on the same day, at London Hospital Medical College, Dr. Percy Kidd will deliver the Schorstein Memorial Lecture. The subject will be "Forty Years in the History of Tuberculosis."

AT a meeting of the Royal Society of Edinburgh on October 23, the following officers and members of council were elected: *President*: Prof. F. O. Bower. *Vice-Presidents*: Sir J. A. Ewing, Prof. J. W. Gregory, Major-General W. B. Bannerman, Dr. W. A. Tait, Principal J. C. Irvine, Lord Salvesen. *General Secretary*: Dr. C. G. Knott. *Secretaries to Ordinary Meetings*: Prof. J. H. Ashworth, Prof. R. A. Sampson. *Treasurer*: Dr. J. Currie. *Curator of Library and Museum*: Dr. A. Crichton Mitchell. *Council*: Prof. F. G. Baily, Dr. R. Campbell, Prof. J. Arthur Thomson, Dr. H. S. Allen, Sir Robert Blyth Greig, Dr. J. Ritchie, Prof. E. M. Wedderburn, Prof. T. H. Bryce, Prof. J. Y. Simpson, Prof. D'Arcy W. Thompson, Sir James Walker, Prof. E. T. Whittaker.

IN her presidential address, delivered on October 19, to the Society for Constructive Birth Control and Racial Progress, Dr. M. C. Stopes dealt with the ideals and present position of constructive birth control. She stated that the social ideal urgently needed to-day is the revision of our present mistaken tendency to breed from defective stock more than from good and healthy stock. Acting as a motive force is also the individual human commiseration for the sufferings endured by unhealthy, over-burdened slum women, involuntarily the mothers of degenerate stock. Dr. Marie Stopes is of opinion that the Utopian idea is attainable through the use of scientific knowledge in such a way as to secure the increase from the best, and to decrease the population of low-grade human beings.

MESSRS. W. HEFFER AND SONS, LTD., booksellers, Cambridge, have recently purchased the interesting and valuable library of Prof. R. B. Clifton, late professor of natural philosophy in the University of Oxford. They have a catalogue in preparation. A copy will be sent post free on application.

WE have received from Mr. W. Rodier, 327 Collins Street, Melbourne, a letter and some pamphlets dealing with the rat problem as bearing upon the article by Mr. Alfred E. Moore in our issue of May 20 (vol. 109, p. 659). Mr. Rodier's scheme for the extermination of rats, known as "The Rodier System," which consists in liberating all the males trapped, is of course well known and its merits thoroughly appreciated by all interested in the destruction of

the rat. Mr. Moore, to whom we submitted Mr. Rodier's communication, sends us the following comments upon it: "Boelter, who joined me soon after I had initiated the British war on rats and mice, agreed with me that if we could get international, unified, and synchronised war on the rat, then and not till then could we hope to have any success from Mr. Rodier's method; we agreed that our first step must be to get the public fully to appreciate the disastrous nature of the rat menace, but that we could not afford to postpone rat destruction by all and every means until the day when unified effort was forthcoming. If Mr. Rodier agrees to work for an International Commission to bring about a proper understanding of the rat problem and concerted action, then I am sure all of us would gladly cooperate; but until we can get the public mind fully alive to the extent of the issue, I am sure it would be just as reasonable during the fly season to catch as many flies as possible and to liberate all the males: in this instance at any rate we should have a fair chance of seeing the progress of our work."

READERS of NATURE interested in topography may like to have their attention directed to a catalogue of some 230 books, maps, and engravings relating to London and its vicinity just issued by Mr. F. Edwards, 83 High Street, Marylebone, W.1.

THE useful quarterly list of new books and new editions added to Lewis's Medical and Scientific Circulating Library for the months July to September has just been received. Copies are obtainable free of charge from Messrs. H. K. Lewis and Co., Ltd., 136 Gower Street, W.C.1.

MR. W. H. ROBINSON, 4 Nelson Street, Newcastle-upon-Tyne, has recently issued a catalogue of some 300 second-hand books of science. The prices asked seem very reasonable. An interesting item is a copy of the first edition in English of The Anatomical Exercises of Harvey, concerning the Motion of the Heart and Blood; with the Preface of Zechariah Wood, Physician at Rotterdam, to which is added Dr. James De Back, his Discourse of the Heart, containing a defence of Harvey's work.

A DIRECTORY for the British Glass Industry is being compiled under the auspices of the Society of Glass Technology. It will contain in classified form the names of all firms, associations, societies, trade unions, educational and research institutions interested in the manufacture and wholesale supply of glass and glass articles, and in the supply of raw materials, plant, and machinery to the industry. It is hoped to publish the volume by the end of the present year.

Our Astronomical Column.

RECENT METEORS.—Mr. W. F. Denning writes that two large meteors were seen at Bristol on October 17 at 7.15 and 10.46. The first of these descended just under the "Pointers" in Ursa Major from $164^{\circ} + 52^{\circ}$ to $164^{\circ} + 45^{\circ}$, and moved very slowly. The other meteor traversed an unusually long path of 113 degrees, the flight being from $163^{\circ} + 74^{\circ}$ to $330^{\circ} - 6^{\circ}$. The duration was about six seconds, and the meteor threw off a bright streak all along its extended course. The radiant point was near the horizon in $152^{\circ} + 39^{\circ}$, but no further accounts of the object have yet been received.

The October meteoric shower has been fairly well observed this year, a remarkable succession of clear nights having occurred between October 10 and 21. The chief showers have been from Orion and Aries. Mr. Prentice at Stowmarket saw 246 meteors between October 10 and 18 in 34 hours of watching. The chief radiants in activity were determined by him as follows:

- a Arietids . $31^{\circ} + 19^{\circ}$ 8 Meteors, October 13-15.
- e Arietids . $41\frac{1}{2}^{\circ} + 22^{\circ}$ 17 " " 14-18.
- v Orionids . $90^{\circ} + 16^{\circ}$ 10 " " 18.
- † Geminids . $98^{\circ} + 15^{\circ}$ 8 " " 14-15.

These various showers are well known at this period of the year. The Arietids are slow-moving, brilliant meteors, while the Orionids and Geminids are swift, streaking meteors.

OCCULTATION OF ALDEBARAN.—On Monday next, November 6, the moon will occult the bright star Aldebaran in Taurus. The disappearance takes place at 10^h 8^m G.M.T., and the reappearance at 11^h 20^m G.M.T.

COMETS.—Numerous observations are to hand of the comet discovered by Dr. Baade on October 19. The comet is easily visible in a moderate telescope, and should be observable for some months. It is,

however, receding from the sun and earth. The following elements are by Mdlle. Vinter Hansen, from Copenhagen observations on October 22, 23 and 24:

$$\begin{aligned} T &= 1922 \text{ Oct. } 16^{\text{h}} 57^{\text{m}} 01^{\text{s}} \text{ G.M.T.} \\ \omega &= 114^{\circ} 32' 07'' \\ \Omega &= 219^{\circ} 50' 89'' \\ i &= 51^{\circ} 47' 00'' \\ \log q &= 0.35890. \end{aligned} \quad \left. \vphantom{\begin{aligned} T \\ \omega \\ \Omega \\ i \\ \log q \end{aligned}} \right\} 1922^{\circ} 0.$$

EPHEMERIS FOR GREENWICH MIDNIGHT.

	R.A.			N. Decl.	log r	log Δ.	Mag.
	h.	m.	s.				
Nov. 6.	20	28	4	32° 36' 0			
	10.	20	37	43 31 28 .1	0.3622	0.3035	10.1
	14.	20	47	28 30 21 .4			
	18.	20	57	18 29 16 .2	0.3646	0.3150	10.2
	22.	21	7	10 28 13 .0			

The comet should be looked for high up in the south-west soon after sunset.

The search ephemeris lately given for Perrine's periodic comet did not include perturbations. M. Kasakov of Moscow finds that these are large, and gives the following elements:

$$\begin{aligned} T &= 1922 \text{ Dec. } 25^{\text{h}} 2^{\text{m}}. \\ \omega &= 167^{\circ} 15' 21'' \\ \Omega &= 242^{\circ} 18' 53'' \\ i &= 15^{\circ} 42' 56'' \\ \phi &= 41^{\circ} 15' 63'' \\ \mu &= 537'' 538. \end{aligned} \quad \left. \vphantom{\begin{aligned} T \\ \omega \\ \Omega \\ i \\ \phi \\ \mu \end{aligned}} \right\} 1922^{\circ} 0.$$

EPHEMERIDES FOR GREENWICH MIDNIGHT WITH TWO ASSUMED DATES OF PERIHELION.

	Perihelion Dec. 21.2.				Perihelion Dec. 25.2.			
	h.	m.	s.	N. Decl.	h.	m.	s.	N. Decl.
Nov. 10.	21	14	5	5° 29'	20	58	7	3° 9'
	18.	21	35	11 4 35	21	17	53	2 33
	26.	21	59	34 3 52	21	40	32	2 9
Dec. 4.	22	27	1	3 21	22	5	53	1 58

It is some 26° south of the other comet, but considerably fainter.