

in chemistry and chemists to the end. Even when infirmity, which might have deterred many a younger man from making the effort, came upon him, he would travel from Northwood to attend meetings of the Chemical Society's council. These visits became less frequent as his sight began to fail, and after the summer of 1923 he was seen only once more at Burlington House, when, at the annual general meeting in 1924, as those who heard him will never forget, he made his last speech, rich in reminiscences of his early days as a fellow of the Society. To those who had the privilege of serving on his staff in Birmingham or London, he was ever the stimulating counsellor and appreciative chief. Nor were his students slow to recognise that in him they had a teacher who never spared himself in their interest, and, giving them of his best, he received in return that consideration which old-world courtesy invariably calls forth.

Sir William Tilden was twice married: first in 1869 to Charlotte, daughter of the late Robert Bush, and secondly, in 1907, to Julia Mary, daughter of the late C. W. Ramie. He is survived by Lady Tilden and by a son of the first marriage, Philip Armstrong Tilden, who has achieved distinction as an architect. The funeral at Northwood Parish Church on Wednesday, Dec. 15, was attended by a large body of mourners, including besides relatives the representatives of societies connected with chemistry, pure and applied, and many personal friends.

W. P. WYNNE.

SIR JAMES WILSON, K.C.S.I.

WE regret to record the death of Sir James Wilson, late of the Indian Civil Service, on Dec. 22 at his residence, Annieslea, Crieff. He was a recognised authority on a variety of topics connected with India—administrative, economic, philological, and ethnographic. After his retirement from the Indian service in 1911, when he settled in London, being keenly interested in agricultural matters, he acted as superintending inspector under the Board of Agriculture and Fisheries, and became a governor of the Agricultural Organisation Society; in 1914 he was appointed permanent delegate for Great Britain, Canada, Australia,

New Zealand, and South Africa to the Institute of Agriculture in Rome.

Sir James Wilson was born on Feb. 27, 1853, the son of the Rev. John Wilson, of Dunning, Perthshire. He was educated at Perth Academy and, after passing the Indian Civil Service examination in 1873, graduated at Edinburgh and then proceeded to Balliol College, Oxford, where he obtained the Boden Sanskrit scholarship, but did not stay long enough to take a degree. He went to India in 1875, and was posted to the Punjab. A distinguished administrative career, which included such high official appointments as secretary to the Punjab Government and the Financial Commissioner, membership of the Punjab Legislature, and, on Lord Curzon's selection, secretary to the Government of India in the Revenue and Agricultural Department, and finally Financial Commissioner of the Punjab, was recognised by the award of the C.S.I. in 1900 and the K.C.S.I. in 1909, two years before his retirement.

Apart from his official duties, Sir James Wilson's interest lay especially in investigating the dialects and folklore of his province. He wrote on tribal customs in the Gurgaon, Sisra, and Shahpur, compiled a gazetteer of the latter district, and wrote a grammar of Western Punjabi. Similar interests in folklore and dialect after his retirement produced "Lowland Scotch as Spoken in the Lower Strathearn District of Perthshire," published in 1915, "The Dialects of Robert Burns," and recently, "Scottish Poems of Robert Burns in his Native Dialect." He had also completed a book on the dialects of central Scotland.

WE regret to announce the following deaths:

Dr. Laurence Pullar, who, by a gift of £10,000, made possible the survey of the Scottish lochs carried out by the late Sir John Murray, and later, with Sir John, edited the six large volumes containing the results, on Dec. 22, aged eighty-eight years.

Dr. H. Campbell Ross, Director of the McFadden Research Foundation at the Lister Institute of Preventive Medicine, London, on Dec. 14, aged fifty-one years.

Mr. T. S. P. Strangeways, Huddersfield lecturer in special pathology and Director of the Research Hospital at Cambridge, on Dec. 23, aged sixty years.

News and Views.

THE New Year honours list includes the names of the following men of science and others associated with scientific work:—*Privy Councillor*: The Hon. W. G. A. Ormsby-Gore, Under-Secretary of State for the Colonies and president of Section E (Geography) of the British Association at the Oxford meeting in 1926. *Knights*: Dr. Henry Head, who has made distinguished contributions to our knowledge of the nervous system; Mr. A. E. Kitson, Director of the Geological Survey, Gold Coast Colony; Mr. J. C. W. Reith, Managing Director of the British Broadcasting Company; Dr. D. Milne Watson, Governor of the Gas Light and Coke Company, London. *K.C.B. (Civil Division)*: Dr. G. Macdonald, Secretary to the Scottish Education Department. *C.B. (Civil Division)*: Mr. H. T. Tizard, Principal Assistant Secretary, Department of Scientific and Industrial Research. *C.I.E.*:

Lieut.-Colonel J. W. Cornwall, lately Director, Southern India Pasteur Institute, Coonoor, India; Mr. D. Anstead, Director of Agriculture, Madras; Mr. D. Milne, Director of Agriculture, Punjab. *K.C.M.G.*: Prof. W. Mitchell, Vice-Chancellor of the University of Adelaide, in recognition of his services to the Commonwealth of Australia. *C.B.E. (Civil Division)*: Mrs. Eugénie Strong, Assistant Director of the British School of Archæology in Rome.

LORD BALFOUR, on behalf of the Prime Minister, will receive a deputation on Feb. 15 from the British Waterworks Association, the Salmon and Trout Association, the Society of Medical Officers of Health, and other bodies, who wish to persuade the Government to set up a central authority to deal with the vexed question of river pollution in Great Britain. In our leading article of Jan. 1 we

pointed out the necessity for scientific research in order to deal with many of the problems which present themselves, and outlined the preliminary investigations which have been carried out by the Select Committee on River Pollution during the last five years. The deputation will press for an extension of the relatively small amount of research already in progress, particularly in regard to the best methods of dealing with various harmful trade effluents. It would clearly be an advantage for the scientific investigations carried out by the State and dealing with water supply, sewage disposal, and river pollution, to be under one authority, since they are to a large extent interdependent. The movement towards keeping rivers free from pollution by industrial wastes is in no sense hostile to the industries causing the damage, the bodies concerned believing that the remedy is to be found in centralisation of effort and the application of scientific method to the many problems which have hitherto found no solution. The honorary secretary of the joint committee promoting the deputation is Mr. C. N. Hooper, Fishmongers' Hall, London Bridge.

THE opening of a public telephone service between London and New York this month proves that great progress has been made during the last two years by the radio engineers engaged on long-distance telephony. The charge is to be at the rate of £15 for three minutes' conversation and £5 for every additional minute. If other callers are waiting the speaker is limited to twelve minutes. If connexion be made with the number required but neither the person called nor a substitute accepted by the caller answers, a report charge of £2 only will be made. The problems that the engineers had to overcome mainly arose from the overloading of the ether with radio waves. The wave band chosen lies between 5000 and 6000 metres, and there are forty radio-telegraphic companies already taking up nearly all the available wave-lengths in this band. Very delicate switching devices controlled by the voice are used. When the London subscriber speaks, the circuit to New York is automatically switched on, and the circuit from New York to London is switched off. As soon as he ceases speaking the switches assume their normal position. When the New York subscriber replies, the converse operation takes place.

THE Post Office gave a very successful demonstration of trans-Atlantic radio-telephony to the Press on Mar. 7 of last year, when for four hours conversation took place between English press representatives and their confrères in New York (see NATURE, Mar. 13, 1926, p. 387). The difficulties connected with atmospheric conditions have not yet been completely overcome. The phenomenon of 'fading' occurs shortly after the time of sunset each day. It varies therefore with the season, occurring between 5 P.M. and 7 P.M. in winter, and between 8 P.M. and 10 P.M. in summer. When the time is 2 P.M. in Great Britain it is about 9 A.M. in New York. Hence between 2 P.M. and 6 P.M. the business times overlap. After this time, if the New York subscriber calls up, he will be put through

to the London subscriber at his private residence. In the initial stages, however, it is not proposed to have a continuous twenty-four-hour service. The starting rates have been fixed on a commercial basis, and will be reviewed from time to time as experience is gained in working the service.

In July last, Dr. W. J. S. Lockyer, director of the Norman Lockyer Observatory, Sidmouth, sent us a note giving the results of a comparison of the 50-day weather forecast for April-June prepared by Lord Dunboyne for the *Daily Mail*, with actual weather experienced. Sidmouth is in such a geographical position that the predictions for the division of Great Britain marked "England, S.W., Scilly Isles" on Lord Dunboyne's chart could be fairly applied to it. Dr. Lockyer therefore constructed a similar chart showing, on the same scale and for the same period, the weather forecast compared with fact. There was little resemblance between the two curves, but it seemed to us that the subject merited inquiry in more detail than Dr. Lockyer had been able to give to it. We therefore invited Capt. C. J. P. Cave to make such an examination over a longer period, and we were fortunate in obtaining his consent to do so. The results are described in an article which appears elsewhere in this issue, and the general conclusion reached is that the success or otherwise of the predictions is mainly a matter of chance. We sent Lord Dunboyne a copy of the article and offered him space for any comments he might care to make in reply to it. Lord Dunboyne, however, regretted that he had not the time to prepare such a reply, but his brother, Capt. the Hon. Robert Butler, has consented to do so, and we propose to publish his communication in an early issue.

EARLY on Jan. 1, a series of violent earthquakes disturbed the southern part of the Imperial Valley, which occupies the south-eastern corner of California and the northern part of Lower California, Mexico. Many buildings were destroyed in the border towns of Calexico and Mexicali, and water-mains were broken. It is estimated that about fifty shocks were felt during the first ten hours. The epicentre coincides very nearly, if not exactly, with that of the earthquakes of June 22, 1915, studied by Mr. Carl H. Beal (*Amer. Seis. Soc. Bull.*, vol. 5, 1915, pp. 130-149). On this day there were two violent shocks, both of intensity 9 (Rossi-Forel scale). The area disturbed by them was about 50,000 square miles, but the value of the property destroyed was only about one-third of that lost on Jan. 1. The Imperial Valley is almost entirely below sea-level and lies in a depression which, in recent geological times, was a branch of the Gulf of California. The district is traversed by some remarkable faults with a general north-west and south-east direction. One of these, the San Jacinto fault, apparently branches from the San Andreas rift, with which the Californian earthquake of 1906 was connected. It has been traced close up to the epicentral area of the earthquakes of 1915 and 1927, and is believed to traverse the Imperial Valley. Mr. Beal suggests that the earthquake of 1915 may have been caused by a displacement along this important fault.

SOME results of importance obtained from a careful examination of the prehistoric monuments of the island of Minorca, which extended over a period of some months, are described by Mr. Frederick Chamberlin in the *Times* of Dec. 30. It has generally been held that the *talayots* of Minorca, great mounds of huge, rough uncemented stones 26 ft.-30 ft. high, were comparable with the better known *nurhags* of Sardinia. This comparison was based on the view that the *talayot* in some, if not all, cases was built hollow with an entrance, resembling in this respect a chambered cairn. Mr. Chamberlin examined 186 *talayots*, some previously unknown. Of these, 107 were in a sufficiently good state of preservation to permit him to say that 32 only, or one out of three, had ever had an entrance of any sort, while three alone had an interior chamber, and only one more than one apartment. It is clear, therefore, that the *talayot* is not comparable to the *nurhag* and, indeed, is a monument without a parallel. Associated with the *talayot*, and usually within a hundred feet of it, is a class of monument known locally as a *taula*—a two-stoned monument 5 ft.-12 ft. high in the shape of a Greek T, the flat top stone being fully 12 ft. long. Ten of these are now known. Each is surrounded by a horse-shoe-shaped wall pierced by a doorway surmounted by a single-stone lintel. The two classes of monument clearly stand in relation one to another, though there does not appear to be any evidence of orientation. Sir Wallis Budge has expressed the opinion that the *talayots* are pyramids of a funereal nature, and the *taulas* altars for sacrifice or other funereal ceremonies. A third class of monument, called *navis* from its resemblance to a ship, of which sixteen are known, has an elliptical chamber 15 ft. long by 7 ft. high, and appears to have served as a tomb for dwellers in the numerous caves in the neighbourhood.

THE first five parts, constituting the first volume of the "Nomenclator animalium, generum et subgenerum," have now been issued by the Prussian Academy of Sciences. Each part consists of 160 pages, $12\frac{1}{2} \times 9\frac{1}{2}$ inches, printed in three columns with about 50 names to the page. The work will be completed in four more volumes and will contain more than 200,000 entries. It is hoped that the last part will be issued at the close of 1929. The promoters of this great work seem to have found some difficulty in making it known, and it has therefore been decided to extend to March 31, 1927, the term during which the names of subscribers will be received. The subscription price is 15 marks for each part, or 75 marks per volume. After that date the selling price will be raised to 20 marks a part. Payments should be made by cheque or money order to the Preussische Akademie der Wissenschaften, Berlin, N.W.7, Unter den Linden 38. The Academy also offers the "List of Literature" used in the "Nomenclature," for 10 marks; it occupies 288 pages. During the progress of this laborious undertaking, two successive editors, F. E. Schulze and W. Kükenthal, have died. The present editor-in-chief is Prof. K. Heider, and the secretary is Prof. Th.

Kuhlgatz. Our readers may fittingly be reminded that the British Association, the Linnean Society of London, and a few individuals in Great Britain have helped the work by donations amounting to about £500.

It should scarcely be necessary for us to emphasise the extraordinary service that this publication renders to every working zoologist. It cannot, indeed, supersede Sherborn's "Index Animalium" in course of publication by the Trustees of the British Museum, a work which the German editors say "kann nicht genug bewundert werden." But the vaster scope of Sherborn's "Index," and the more exhaustive method by which it is compiled, indicate that no man living can expect to see its completion beyond 1850. The Prussian Academy, adopting a more rapid method, gives us a list of generic and subgeneric names down to 1922, those for the last twelve years being copied, without further reference, from the indexes to the "Zoological Record." The names of fossil animals are of course included, and almost excessive care has been taken to reproduce every variation in spelling down to obvious and ridiculous misprints. We have checked some of the earlier parts by other indexes accessible to us and have found an occasional date or page-number wrong (e.g. 1646 for 1846, 11 for 116), some initials incorrect, and the † indicating 'extinct' wrongly omitted or inserted. Such almost inevitable slips or misprints scarcely affect the usefulness of the work. Actual omissions are exceedingly rare, and if some unwarranted names have found their way in, they will do no great harm. Every serious student will continue, as heretofore, to verify his references. The great thing is to find the reference, and that is labour worth paying for.

ACCORDING to a report of the Nairobi correspondent of the *Times* which appeared in the issue of Dec. 28, Mr. L. S. Leakey, of the Cutler Dinosaur Expedition, has discovered a complete human skeleton at Nakuru buried at a depth of twelve feet in the flexed position with knees drawn up to the chin. With the skeleton were more than a hundred stone implements described as 'Mesolithic,' mostly lunates and backed points of obsidian with a few bone points. The skeleton is that of a 6 ft. man and is said to be "not negroid." The skull has a nose of medium width and is not prognathous. Mr. Leakey is stated to regard this man as belonging to the "Wayland-Magnosian" period of Uganda. Judging from the description, the implements would appear to belong to a type already found in this area which Mr. Wayland himself regards as comparable to Azilian. Mr. Leakey's work in investigating stone age remains in Uganda is being financed in part by the Percy Sladen Memorial Fund; but it is hoped that the interest which has been aroused by this discovery may call forth further financial assistance and also that the Kenya Government will agree to assist to a limited extent in 1927. Should the report be fully substantiated in all its details, the discovery is likely to prove of considerable importance in African archaeology.

THE council of the *Field Distemper Research Fund* states that the investigations so far pursued have confirmed the view that canine distemper is caused by a filter-passing ultra-microscopic virus, and the symptoms of the disease itself have been disentangled from those of the many secondary infections that occur. Several puppies have been rendered so far immune by inoculation that infection afterwards with the virus produces only a slight and transitory effect. The material employed for the inoculation is at present of a crude nature and of uncertain and inconstant strength, so that the procedure has not yet reached the stage when it can be widely used, but progress in this direction is anticipated. The work is being carried out at Mill Hill in collaboration with the Medical Research Council; and the Duke of Portland, president of the Distemper Research Council, appeals for further donations to the fund, which should be forwarded to the organising secretary, Windsor House, Bream's Buildings, London, E.C.4.

WE have received the second annual report of the Board of Management of the London School of Hygiene and Tropical Medicine to the Court of Governors. The report, which is signed by Sir Alfred Mond, chairman of the Board, gives a brief account of the activities of the school and the progress made during the year. In the Tropical Division, Dr. Balfour reports that the extended courses of study have not led to any decrease in the number of students; in fact, the average number attending is slightly higher than last year. Since the Seamen's Hospital Society has signified its intention of maintaining the hospital at Endsleigh Gardens for a limited period only, the Minister of Health, upon representations made by the Board of Management, has appointed a committee to consider how the necessary clinical and pathological facilities for the study of tropical diseases can best be secured to the School. In order to increase the research work of the School, the Board has decided to apply the capital as well as the income of the Milner Research Fund to this purpose; as part of this plan, Dr. A. W. Grace has been nominated to proceed to the West Indies to undertake research on filariasis, and a contribution of £500 per annum for two but not more than five years has been made towards his expenses; the larger part of the cost of this expedition is being borne by the Royal Society. It is hoped that the formal opening of the Field Station of the Institute of Agricultural Parasitology, at Winches Farm, will soon take place; the work is under the intermediate direction of Prof. R. T. Leiper.

It is satisfactory to learn from the report that the deficit taken over with the London School of Tropical Medicine has been wiped out, owing to an extra grant from the University Grants Committee and a donation from the executors of the late Mr. Alfred de Rothschild; but it is feared that the work of the Tropical Division cannot be carried on without loss, unless increased financial aid is forthcoming. Steps are being taken to enlarge the library, which at present is related entirely to the Tropical Division, so as to build up a library of hygiene, in advance of the

opening of the new School. Unfortunately, the progress of the building has been seriously delayed by the coal strike, since the building committee, after careful consideration, felt they would not be justified in departing from their stipulation that only British steel should be used. However, the steel work should be completed within twenty-five weeks of the termination of the coal dispute, that is, approximately by the middle of this year. Meanwhile, steps have been taken to make appointments to the chairs of bacteriology and immunology, and of epidemiology and vital statistics; thus the Board has the advice and assistance of the two professors, Prof. W. W. C. Topley and Prof. Major Greenwood respectively, in settling the details of the accommodation in the new school and its equipment. During the year Prof. McDowall, of King's College, has given courses of lectures in physiology as applied to hygiene. We welcome the report as evidence of the increasing part the School will play in university life in London.

DR. C. S. MYERS gives a very interesting and lucid account of vocational guidance and selection in the *Nineteenth Century* for November last. By vocational guidance is meant the expert advice offered to a person in regard to his choice of employment; by vocational selection is meant the discovery of the best worker for a given job. Dr. Myers discusses the effects of having 'the round peg in the square hole,' and rightly attributes much industrial discontent, unhappiness, inefficiency, and high labour turn-over to the presence of people in jobs for which they are intellectually and temperamentally unfitted. A high labour turn-over in jobs where security of tenure does not prevail is indicative quite frequently of bad selection. The only satisfactory reason for taking up a particular job is that one has the ability to do it and also that one prefers it to any other: such is, of course, a counsel of perfection, but it is impossible to overestimate the evil effects of forcing a child for reasons extraneous to the work itself or to the child into situations for which he is not adapted. The author points out that children are not, as a rule, the best judges of their capabilities or even interests, being frequently influenced by fashion, prestige, or fleeting interests. Teachers often do excellent work, but not all are either sufficiently gifted or trained for the necessary diagnosis.

OF recent year, special study has been devoted to the problems of guidance and selection, and it is now possible by the application of psychological tests to assess a child's abilities and advise accordingly. Dr. Myers wisely insists in his article that a mere mechanical application of tests is useless: they are of diagnostic value, but must always remain the servant, not the master, of the vocational adviser. Everybody who has come in contact with industry in its different fields has been impressed by the dissatisfaction of many who have had to enter an uncongenial trade or profession and are now too old to change. One point relevant to this discussion might be stressed, namely, that society as well as the

individual parent must cease to look upon certain occupations as more respectable than others. How many miserable clerks would be happy as manual workers were it not that some grades of society consider clerical work more respectable than manual work?

THE Illumination Research Committee of the Department of Scientific and Industrial Research has issued Technical Papers Nos. 1, 2, and 3, dealing respectively with the terminology of illumination and vision, the transmission of window glasses and the effect of the enamelled steel reflectors used in works. The measurements on which the last two reports depend were made at the National Physical Laboratory by members of the staff. Of the importance and value of the two to industry there can be no doubt and they should command a ready sale. In a prefatory note to the first report the chairman of the Committee explains that as the technical terms used in illumination are not widely known, it has been thought desirable to publish explanatory notes so that readers of future reports would have full knowledge of the terms used in them. The prices of the three reports—9d., 6d., and 1s. respectively, seem high compared with the prices of corresponding publications of the United States Bureau of Standards or of those issued by the Support of Workings in Mines Committee of the British Mines Department, e.g. Paper No. 12 on Scotland, 24 pp., 4s. 2d. for 50 copies.

ARRANGEMENTS for courses of instruction in anthropology for the coming session are announced by the University of Paris. In view of the bias towards practical application in Colonial administration which is a feature of the work of the recently founded Institut d'Ethnologie, it is interesting to note that lectures are to be given there, beginning in late December or January, on descriptive ethnography by M. Mauss, descriptive linguistics by M. Marcel Cohen, anthropology by M. Paul Rivet, and extra-European prehistory by M. l'Abbé Breuil. The special provinces of French administration are covered by courses on the linguistics and ethnography of Africa, lecturer not stated, owing no doubt to the lamented death of M. Delafosse, and the linguistics and ethnography of eastern Asia and Oceania. The courses at other colleges and institutions of the University cover a wide range: in physical anthropology, M. Verneau on the races of the French Colonies; in ethnography, M. Mauss on the religions of non-civilised peoples, with special reference to Australian rites; M. Raynaud on the archæology of Central America and Peru, M. Cabaton on the Malays, M. Capitan on American ethnic affinities, and origins, M. Julien on Madagascar, M. Labouret on East Africa, M. Milliot on Morocco, and others. In sociology there are seven courses, including lectures by M. Granet on the extreme East, M. Massignon on Islam, M. Cabaton on Indo-China, and a general course by M. Fauconnet. There are some twelve or thirteen courses in various languages, and a course in prehistory will be given by M. G. Renard.

No. 2984, VOL. 119]

DR. EDWARD R. WEIDLEIN, Director of the Mellon Institute of Industrial Research, University of Pittsburgh, has been elected president of the American Institute of Chemical Engineers for the year 1927.

WE have recently received the annual report of Livingstone College, Leyton, London, E.10, for the year 1925-26. The College exists to instruct missionaries in the elements of medicine, and seventy-seven students took the various courses. The College paid its way except for about £35, but a deficit of £1375 still exists. A fund is being established to the memory of Dr. Harford, the first principal, and donations to this and for the general purposes of the College are asked for.

THE Rockefeller Foundation has published a fourth series of "Methods and Problems of Medical Education," dealing with the methods of obtaining, assembling, filing, and storing the record of the sick person. After a study of several admirable systems, that of the Presbyterian Hospital of New York City is believed to combine the maximum of aims to be attained and is set out in full detail with many facsimile reproductions. It combines not only a full history of the case while in hospital, but also means for following up the after history of a case after discharge.

THE annual analysis of books published in the British Islands during the past year which is issued by the *Publishers' Circular* shows that the total number of books published in 1926, namely, 12,799, was 403 less than that for 1925. This decrease, however, was due entirely to the smaller number of new editions, the total of actual new books, 9989, being slightly greater than in 1925. The number of books on science increased from 617 to 660, and those on technology from 609 to 629, while medicine remained the same with 399 publications, and agriculture decreased from 208 to 184. Scientific books included 20 translations and 83 new editions. Dividing the literature of 1926 into twelve main groups, fiction heads the list with the most publications, while science comes sixth and technology seventh. In 1914, science was third and technology fifth, and in 1925 the order was science seventh and technology eighth.

WE have received from Messrs. James Swift and Son (81 Tottenham Court Road, London) their catalogue of microscopes and accessories. Of microscopes, four models are constructed according to the specification of the British Science Guild; the 'Didaxis' is of new design, combining simplicity with strength and rigidity, and eminently suitable for students' use; the 'Universal Technical' is a high-class instrument particularly adapted for research work of all kinds. Two oil-immersion lenses of low aperture are catalogued, an $\frac{1}{8}$ -in. N.A. 0.92 and a $\frac{1}{2}$ -in. N.A. 0.95, which have been primarily designed for use with dark-ground illumination.

AMONG the works to be published early in the new year by the Cambridge University Press are "The Collected Papers of Sir James Dewar," in two volumes, edited by Lady Dewar, J. D. H. Dickson, H. M.

Ross, and E. C. Scott Dickson. The work will include not only the papers which appeared under Sir James Dewar's name alone, but those also which were published jointly with other investigators, excepting the series on spectroscopy by him and Prof. Liveing which have been issued separately. The same publishers also announce "Differential Geometry of Three Dimensions," by Prof. C. E. Weatherburn; Volume 2 of the second edition of "Principia Mathematica," by Prof. A. N. Whitehead and the Hon. Bertrand Russell; and a new volume in the series of Cambridge Mathematical Tracts, "The Theory of Integration," by L. C. Young.

THE Report of the Director-General of the Ordnance Survey for 1925-26 has recently been published. In trigonometrical work a field section is at work restoring the primary and secondary trigonometrical stations and marking them by concrete blocks. This has been completed south of a line between the Wash and the mouth of the Severn. Good progress has been made with the work of recomputing the co-ordinates of the primary and secondary trigonometrical points on the Gauss conformal projection. A revision of the magnetic survey of Great Britain was begun in the Channel Islands. In map production the third revision of the one-inch map of England and Wales is complete, and of the 146 sheets, 145 have been published in the popular edition. The revision of the map of Scotland was nearly finished and 9 sheets of the popular edition were published. All sheets of the quarter-inch layer map are published,

two more sheets of the revised half-inch map, and one out of three sheets of the new ten-inch map. Progress has been maintained in the revision of the six-inch map, which is now again being published in quarter sheets.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—Additional Research Fellows in the Department of Glass Technology, The University of Sheffield—The Registrar, The University, Sheffield (January 12). A laboratory assistant for photographic work, at the Building Research Station of the Department of Scientific and Industrial Research—The Director of Building Research, Building Research Station, Garston, nr. Watford (January 15). An assistant master, qualified in physics and mathematics, at the Royal Naval College, Dartmouth—The Headmaster of the College (January 26). A Warden of Goldsmiths' College—The Academic Registrar, University of London, South Kensington, S.W.7 (January 31). An assistant in entomology at the Pathological Laboratory of the Ministry of Agriculture and Fisheries at Harpenden—The Secretary, Ministry of Agriculture and Fisheries, 10 Whitehall Place, S.W.1 (February 7). A professor of anatomy in the University of Adelaide—The Registrar, University of Adelaide, South Australia (March 1). A physicist in connexion with the Linen Industry Research Association, to take charge of a section dealing with finishing problems—The Secretary, The Research Institute, Lampeg, Co. Antrim.

Our Astronomical Column.

COMET COMAS SOLA.—The following is a continuation of the ephemeris for 0^h U.T.

	R.A.	N. Decl.	log r.	log Δ.
Jan. 8.	2 ^h 26 ^m 6 ^s	15° 13'	0.279	0.112
12.	2 28 48	16 4	0.276	0.121
16.	2 31 56	16 55	0.273	0.129
20.	2 35 48	17 48	0.270	0.138
24.	2 40 3	18 41	0.267	0.146

The brightness remains nearly constant, about mag. 12.

Mr. F. E. Cunningham supports the suggested identity with Spitaler's Comet 1890, vii., noting that Tisserand's criterion is satisfied.

SUNSPOT ACTIVITY, 1926-27.—The list of notable sunspots for the present year has already begun. A large spot, conspicuous also on account of its regularity of outline, was first seen during the last few days of December and was on the sun's central meridian in the forenoon of Jan. 1. The latitude of this spot was 7° S.; another large spot, also in equatorial latitudes, was reported in NATURE of Dec. 25, 1926, p. 925. It is evident that large spot disturbances are now appearing within a comparatively wide range of latitude—a sure indication that the sun has entered upon the maximum phase of this cycle. Judging, however, from the average latitude of spots and faculae of the past year, the highest peak of the curve will not be reached before the end of 1927. The spots of 1926 were considerable and show an increase in mean daily area of about 50 per cent. greater than that of 1925. Eleven groups of spots, large enough to be seen with the naked eye, were reported in these

columns at the time of their respective appearances, but there were at least half-a-dozen other groups of almost equal importance.

Particulars of the recent spot are as follows:

No.	Date on Disc.	Central Meridian Passage.	Latitude.	Area.
1	Dec. 26-Jan. 7	Jan. 1.3	7° S.	1/1200 of sun's hemisphere.

ANOTHER REPETITION OF THE MICHELSON-MORLEY EXPERIMENT.—Mr. Roy J. Kennedy describes in the November issue of the *Proc. U.S. Nat. Acad. Sciences* a repetition of this experiment. He reduced his light path to 4 metres (one-sixteenth of that employed by Prof. Dayton Miller), and enclosed the apparatus in an air-tight case, filled with helium at atmospheric pressure, thus reducing the disturbing effect of density changes to one-tenth of that in air. A further device used was raising one half of the surface of his mirror a small fraction of a wave-length, which was effected by cathode deposition of platinum. Experiments were made both at the Norman Bridge Laboratory, Pasadena, and in the 100-inch telescope building at Mt. Wilson. Observations were made at various times of the day, but most often at the time when Prof. Dayton Miller's conclusions would require the greatest effect. The effect at both stations was absolutely *nil*: "there was no sign of a shift depending on the orientation." Mr. Kennedy claims that a shift one-fourth of that announced by Miller would have been detected, and states that he will make further experiments to search for a possible shift in other directions.