Obituary.

DR. JOHN RENNIE.

BY the sudden death of Dr. John Rennie, of the University of Aberdeen, on Aug. 30, zoology has lost an investigator of high quality. Educated at Aberdeen under the late Prof. Alleyne Nicholson and others, Dr. John Rennie became in 1899 chief assistant to Prof. J. Arthur Thomson, and he so continued until 1917, when he was promoted to be lecturer in parasitology and experimental zoology, and was put at the head of a laboratory of his own. He had previously become lecturer in agricultural zoology in the College of Agriculture, and he was also in charge of the nature-study classes at the Training College.

Dr. Rennie had great gifts as a teacher, for he was singularly clear in his lecturing, thorough, deliberate in manner, and of unruffled patience. He had a discernment of profitable problems to work at, for one of his early successes was an account of the minute structure of the Islands of Langerhans, which he had found in sharply defined form in some teleostean fishes. Along with a physician, he began trying the effect of extract of these Islands on diabetic patients, a distant hint of insulin treatment. For various reasons, especially the difficulty of steady supply, this experiment was not carried far.

In connexion with his agricultural work, Dr. Rennie became much interested in entomology, and this led him, along with Mr. John Anderson, lecturer in bee-keeping in the College of Agriculture, to attack the problem of Isle-of-Wight disease in hivebees. Thanks to the generosity of Mr. A. H. E. Wood, of Glassel, one of the leading apiarists in Scotland, Dr. Rennie was able to secure the assistance of Dr. Bruce White, who worked in Prof. Shennan's Pathological Laboratory, and of Miss Elsie Harvey, who worked in his own. It was a

THE brochure entitled "Broadcast English I. Recommendations to announcers regarding certain words of doubtful pronunciation," which was recently published by the British Broadcasting Corporation, is a scholarly production, and one that should appeal to a wider audience than that for which it is primarily intended. Though the pen is the able one of Mr. A. Lloyd James, of the School of Oriental Studies, the voice is that of the expert committee, which includes, among others, the Poet Laureate and Mr. G. Bernard Shaw, and was appointed by the Corporation in 1926. Speech, it is pointed out, is governed by local convention and public taste, and although most people think there are right and wrong ways of speaking, these adjectives are only applicable where the different considerations of propriety all lead to the same conclusion. "The higher a community climbs in the social scale, the greater is the uniformity in its speech." There is no standard pronunciation of English, so there cannot be one and only one right way of pronunciation. Our language is rich in alternative pronunciations of equal authority, and

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case of team-work, for it was Dr. Bruce White who first recognised the significance of the tracheal mite, *Acarapis woodi*, and it was Dr. Rennie who demonstrated convincingly the causal relation between the mite and the disease. At this time he was working far too hard, examining thousands of bees, week after week, and he probably weakened his never robust, though carefully husbanded, health. In the last two or three years Dr. Rennie was working at the curative treatment of Isle-of-Wight disease and had made some important steps.

Dr. Rennie had many friends, won to him by his quiet, unassuming ways, his sincerity and reliability, and his unfailing generosity to other workers. His researches were marked by their high standard of precision and by their cautious thoroughness. Dr. Rennie was about sixty-three years of age; he is survived by a widow, three daughters, and a son. A month or so ago his eldest daughter was married to Dr. Norman Wright, of the West of Scotland Agricultural College.

WE regret to announce the following deaths:

Dr. Jean Brèthes, entomologist at the National Museum of Natural History, Buenos Aires, on July 2.

Mr. Charles Curtis, superintendent from 1884 until 1903 of the Botanic Gardens at Penang, on Aug. 16, aged seventy-five years.

Prof. E. C. Grey, formerly professor of chemistry in the University of Cairo, who carried out investigations for the League of Nations on the food problems of Japan and was known for his work on the chemistry of fermentation, on Aug. 10.

Prof. Wilhelm Wien, professor of experimental physics in the University of Munich, editor of Annalen der Physik and of "Handbuch der Experimentalphysik," who was a distinguished worker on the nature of cathode and canal rays, aged sixty-four years.

News and Views.

the task of the B.B.C. has been that of deciding between them. The special difficulties of the task originate in the discrepancy between sound and written symbol, the presence of many foreign words, the relationship between the value of a symbol in the modern language and the value it had in a classical tongue, and the absence of any principle to govern the incidence of stress.

THE task of the Committee, it will be admitted, was not easy, and if one does not agree with all the findings—unanimity was not expected—the main principles of selection, as set out in the booklet, will probably meet with little criticism. The recommendations, having the praiseworthy object of providing some measure of uniformity in the pronunciation of English, will be welcomed by scientific men, who will be particularly interested in those which relate to words, often troublesome to pronounce, that are frequently used by them. Among such words are the following (a doubled vowel letter indicates a long vowel sound, and a double-consonant letter indicates that the previous vowel is short): Acoustic — acóostic, basalt — bássolt, ceramic — serámmic, data—dáyta, evolution—eev-, fetish—féetish, gyratory—jýratory,iodine—éye-o-dyne,laboratory—stress on second syllable, metallurgy—métalurjy, nomenclature—nōménclature, patent—páytent, except in 'Letters Patent' and 'Patent Office,' which have páttent, ration—rhymes with fashion, reverberatory chief stress on second syllable, secondary stress on fourth syllable, rotatory—rōtáytory, zoological zō-ŏlój-ical, except in 'Zoological Gardens,' where the pronunciation is zoo-lój-ical. Although most of these recommendations are in accord with current practice, we believe the chemists will object to 'éye-o-dyne,' the metallurgists to the secondary stress in 'reverberatory,' and perhaps both to 'labóratory.'

Two of the centenaries of greatest scientific interest which occur next year will be those of the deaths of Thomas Young and Sir Humphry Davy, both of whom died in May 1929, the former in London and the latter at Geneva. The birth of Young took place in 1773, that of Davy in 1778, the centenaries of which, in 1873 and 1878, however, the scientific world allowed to pass without proper recognition. In the case of Davy we commented in our columns at the time on this lack of recognition, adding, "We leave it to a foreign nation to honour the memory of one of our greatest explorers and to a petty provincial town to commemorate the birth of one of our greatest chemists." It is with interest, therefore, we learn that inquiries are already being made as to what steps are being taken to pay due homage to Young, who was the first to explain the phenomenon of the interference of light, who described the optometer, the precursor of the ophthalmoscope, who first gave the word 'energy' its present scientific significance, who provided engineers with 'Young's modulus,' and who deciphered the Rosetta Stone. Of Davy it is only necessary now to recall his experiments with nitrous oxide, his isolation of potassium and sodium, his determination of the elementary character of chlorine, and his invention of the safety lamp.

BOTH Young and Davy came from the 'West Country, -the former from Somerset, the latter from Cornwall -both became distinguished fellows of the Royal Society, both were connected with the Royal Institution, both were foreign associates of the Paris Academy of Sciences, and both are commemorated in Westminster Abbey. If Young surpassed Davy in the depth and range of his scientific inquiries and his immense learning, Davy by his manipulative skill, his command of language, and his poetic imagination secured a popularity denied his great contemporary. Both, however, had a world-wide reputation, and while Davy's work is commemorated by the Davy Medal of the Royal Society, Young's is recognised by "The Thomas Young Oration" of the Optical Society. It is to those societies that the scientific world will look for the initiation of the proper celebration of the centenaries of these eminent men of science.

IN Science for July 27, is a report of the address by Prof. L. C. Newell of Boston University on "Count

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Rumford-Scientist and Philanthropist," given at Woburn, Mass., on Mar. 26, the 175th anniversary of Rumford's birth. Rumford is known as the founder of the Rumford Medals of the Royal Society and of the American Academy of Arts and Sciences of Boston, and also of the Royal Institution; his whole career was permeated by the desire to apply knowledge to practical ends, and Prof. Newell speaks of him as "the first man to advocate sensible home economies and rational dietetics." Born plain Benjamin Thompson, it was George III. who knighted him, and the Elector of Bavaria who made him a Count of the Holy Roman Empire. Rumford's versatility can be measured by no ordinary standard, and it was Gibbon who dubbed him "Mr. Secretary-Colonel-Admiral-philosopher" Thompson. Of the Royal Institution, Prof. Newell remarks that Rumford's "conception was a perfect expression of himself. It combined science and philanthropy; its twofold purpose was to seek the truth and make it useful. But, like many institutions established on broad foundations to meet the specific needs of a period, it was not developed as the founder planned. The practical and the useful as seen by Count Rumford were soon overshadowed by the scientific. Stoves, kitchens, and contemporary mechanical contrivances were gradually set aside and quietly forgotten, Models were replaced by men-in succession: Davy. Faraday, Young, Tyndall, Rayleigh, Dewar, Bragg, and many others. These men have carried out Count Rumford's aim-not his special plans, but his aim as a scientist and philanthropist-discovery of truth which helps mankind."

THE Journal of the Society for the Preservation of the Fauna of the Empire is an excellent means of propaganda for a very worthy object. Instead of the formal reports usually contained in such a publication, the recent issue of the Journal has many short and readable articles on various aspects of the fauna of the British Empire and the methods adopted for its preservation. Extracts are given from the informative reports of the game wardens of the Transvaal Game Reserve, of Kenya Colony, and of the Uganda Protectorate, and these indicate that the regulated slaughter of game animals by licence may be a profitable business as well as a means of conserving the stock. Col. J. Stevenson Hamilton writes upon the bush pig, and an article on game and tse-tse fly in Nyasaland states that the slaughter of big game only has not succeeded, and cannot succeed, in reducing the numbers of tse-tse, the indication being that one result is to cause the fly to range farther and become more prone to attack man. The game warden of Kenya praises the introduction, with a view to future liberation, of Scottish red deer to the hills of Kipipara, and proposes to turn down Indian blackbuck in the Colony. He refers to objectors to this policy as taking 'the parochial view.' On the contrary, the objection to the setting free of such importations is the scientific view, and the warden's comparison of the stocking of a wild country with foreign animals to the cultivation of exotic plants in a garden is beside the point. It is sufficient to point out here that the turning loose of

aliens has had in other lands a very direct and injurious effect upon the native faunas into which they were thrust, and, although the Society specifically disclaims responsibility for opinions expressed in articles in its *Journal*, we trust that this is no part of its policy and that it will use its influence against such introductions unless they be made to meet some real need of the district.

THE collection of chemical memorabilia assembled by the late Dr. Edgar Fahs Smith has been presented to the University of Pennsylvania by his widow; it will be preserved intact in its present setting in the Harrison Chemical Laboratory of the University, and will be known as "The Edgar Fahs Smith Memorial Collection in Historical Chemistry." The University is making special arrangements by which it will continue to be accessible to visitors and students of the history of chemistry, many of whom during Dr. Smith's lifetime had frequent recourse to it for study and research work. Dr. Smith, who died on May 3 this year, had served as emeritus professor of chemistry at the University after resigning the provostship in 1920. The collection comprises three main divisions. The first contains about 500 autographed letters and manuscripts of eminent chemists of all nationalities; the second is made up of approximately 1000 portrait prints and engravings of prominent chemists from the days of the alchemists to the present time, and the third consists of nearly 1000 books on alchemy and chemistry. In addition, there is an unusually rare collection of books and manuscripts relating to the history of the University of Pennsylvania and the lives of outstanding alumni and members of the faculty. Dr. Smith had long been interested in the life and works of Priestley, and in 1926 had deposited in the Priestley Museum at Northumberland, Pa., a collection of Priestlevana which was said to be the largest of its kind and included Priestley's balance and the original manu script of "Priestley's Memoirs."

A JOINT expedition of the Percy Sladen Memorial Fund and the American School of Prehistoric Research (of which Prof. G. G. MacCurdy is the Director), is leaving England towards the end of this month to carry out a prehistoric survey in southern Kurdistan. The party will consist of Miss D. A. E. Garrod, Mrs. C. A. Baynes, Mr. F. Turville-Petre, and Mr. Robert Franks. The special object of the expedition is to make soundings in the numerous unexplored caves which lie near the Iraqi-Persian frontier in the neighbourhood of Sulaimanieh. It is hoped that this district, which offers a completely new field to the prehistorian, may yield important traces of palæolithic man. The prehistoric survey carried out this year for the Field Museum by Mr. Henry Field has shown that the North Arabian desert, hitherto regarded as a geographical barrier, was, on the contrary, a highway for the palæolithic tribes, and the presence of palæolithic man in north-eastern Iraq was demonstrated, in the course of a short preliminary survey which Miss Garrod made last February, by the finding of Mousterian implements in gravel-spreads near Kirkuk. These discoveries point to the caves of

Kurdistan as a promising field for prehistoric work, and this fact is fully recognised by the Department of Antiquities at Baghdad, which is assisting the expedition in every possible way.

An important new process for the production of wood pulp is now being developed. An ideal method undoubtedly is to boil the raw wood under pressure with caustic soda solution, so that the lignocelluloses are dissolved and almost pure cellulose left as a pulp, ready for paper making, artificial silk manufacture, and so on. But hitherto the residual liquor, known as 'black lye,' has been a waste product. Dr. Erik L. Rinman, a Swedish chemist, aided by an English engineer, has now found a method of utilising this 'black lye.' The latter is evaporated down in vacuo to a treacle-like product, which is then carbonised at not above 750° F. in retorts, giving a whole series of valuable products, including methyl alcohol, acetone, methylethylketone, acetone oil, light tar oils, heavy tar oils, and turpentine. The residue from the retorts, known as 'soda coal,' consists essentially of sodium carbonate and free carbon, and is burnt on a special new design of mechanical stoker, which consumes more than 97 per cent of the carbon, the heat being used for steam generation, while the sodium carbonate is extracted with water and reconverted into caustic soda. A large plant on these lines is now operating under the superintendence of Dr. Rinman at Regensburg in Bavaria, with water from the Danube, turning out 600 tons of pulp a month, while extensions are being carried out to give 2000 tons a month. A British financial group is now to develop the process throughout the world in association with the original company, Aktiebolaget Cellulosa of Stockholm. A production of 1000 tons of 'Kraft' pulp is stated to result also in 25 tons of methyl alcohol, 18 tons acetone, 18 tons methylethylketone, 12 tons acetone oil, 8 tons light oil, and 50 tons heavy oils.

THE seventh session of the International Commission on Illumination is being held at Saranae Inn, N.Y., on Sept. 22-28, under the presidency of Mr. Clifford C. Paterson, Director of the Research Laboratories of the General Electric Company, Ltd., London. A tour of the principal cities of the eastern United States, organised by the Illuminating Engineering Society of New York (Sept. 7-17) and also the annual Convention of the Society at Toronto (Sept. 17-20), preceded the meeting. The British delegation is particularly strong and consists of fourteen representatives of the technical, professional, and commercial organisations interested in illumination. Twelve papers are being presented on behalf of the National Illumination Committee of Great Britain, which is responsible for the British representation at the meeting. In addition, the British National Committee, which has the secretariat responsibility for the subjects of coloured glasses for signal purposes and of daylight illumination, is presenting a report on each in collaboration with the various experts nominated by the countries which are members of the Commission. The programme includes fifty-two papers covering a wide range of subjects of importance to

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illuminating engineers, architects, medical officers, and students of pure science. Delegates from ten different countries are attending, and there is every prospect of a very successful meeting of the Commission under its first British president, who, together with its secretary, Dr. J. W. T. Walsh, are to be congratulated on the splendid support received from all the countries participating in the work of the Commission.

Some time ago we mentioned in these columns the efforts of the Astronomical Society of the Pacific to cultivate public interest in astronomy by the issue of leaflets containing popularly-written and authoritative information on the latest views and discoveries of workers in this branch of science. We are pleased to learn that this practice is followed also by the New Zealand Astronomical Society, and a set of pamphlets which we have recently received testifies to the valuable work which that Society is doing in this direction. The pamphlets are mainly reprints of articles and notes on astronomical matters which have been published periodically in various New Zealand journals. They deal with such matters as the aspect of the heavens in various months of the year (in connexion with which, opportunity is taken of imparting interesting information concerning the various objects visible), freely interspersed with poems and 'reveries' inspired by the contemplation of celestial objects. The New Zealand press evidently makes ample provision for those of its readers who are interested in astronomy, and we congratulate the Society on the efforts it is making in preparing the newspaper articles and in extending their usefulness by the issue of reprints.

A HURRICANE which has caused much loss of life and damage to property passed over the West Indies a few days ago. According to the New York correspondent of the Times, the wind at San Juan on Sept. 13 blew for six hours at 100 miles an hour, occasionally rising to 150 miles an hour; the anemometer at the weather bureau registered 132 miles an hour before it was carried away. The storm was travelling west-northwestwards at about 300 miles a day. It reached the Florida coast between Miami and Jupiter Inlet on Sept. 16, and a wind velocity of 135 miles an hour was reported at Palm Beach. The storm traversed a belt about 80 miles wide, and considerable damage to houses, communications, and particularly to crops, is reported. The greatest loss of life seems to have been at Porto Rico, where the deaths are estimated to exceed a thousand. In NATURE of Oct. 9, 1926 (p. 524), Mr. E. V. Newnham, of the Meteorological Office, discussed the incidence of tropical cyclones, showing that they may be expected at this time of year, and reference to this article will show that the present hurricane is following the usual course of such storms.

READERS of NATURE will remember that about a year ago a discussion arose out of a review of Prof. C. Spearman's work entitled "The Abilities of Man: their Nature and Measurement" (NATURE, Aug. 6, p. 181; Nov. 12, p. 690). The subject has been carried further in two recent papers, one by Prof. Karl Pearson and Miss Moul in *Biometrika* (Dec. 1927) and the other by Prof. Spearman in the *British Journal* of *Psychology* (vol. 19), which those interested in the discussion are invited to consult.

A STARLING picked up in Leicester, ringed with the inscription "Museum, Göteborg, Sweden, No. 3436," has led the Leicester Museum to prepare a case illustrating long-distance flight and methods of ringing. A similar exhibit illustrating bird-migration has been installed at the Castle Museum, Norwich, where a committee is preparing a scheme for the adequate display of the fine collection of British birds in accordance with modern museum methods. Among accessions mentioned in the recent Report of the Norwich Museums Committee is a set of Eskimo weapons, garments, and domestic utensils, collected in Baffin's Land by the Rev. J. W. Bilby, who resided there for twenty-five years.

NOTICE has been issued of the forthcoming second International Conference (and Exhibition) on Light and Heat in Medicine, Surgery, and Public Health. This will be held at the University of London on Oct. 29-Nov. 1. Sessions will be held in the afternoon and evening of the first three days, and in the afternoon only of the last day. Several continental authorities are expected to take part in the discussions, among whom may be mentioned Prof. Jessinek, Dr. Nagelschmidt, and Dr. Harkamp. An exhibition of apparatus will be held in the Great Hall and the East Gallery of the University adjoining the Conference Hall ; it will be open from 2.30 to 9.30 P.M. each day, closing at 6 P.M. on Nov. 1. The chair will be taken by Lieut.-Col. F. E. Fremantle, M.P., chairman of the Parliamentary Medical Committee. Those wishing to take part in the discussions should send their names to the Conference Department, British Journal of Actinotherapy, 17 Featherstone Buildings, London, W.C.1.

RECENT appointments to scientific and technical departments made by the Secretary of State for the Colonies include four superintendents to the Agricultural Department, Nigeria, namely, Mr. O. J. Voelcker, Mr. G. N. K. Turnbull, Mr. J. H. Palmer, and Mr. E. W. Leach. Mr. E. S. Morgan is appointed a produce inspector to the same Department. A forest surveyor, Mr. J. Brushwood, and a veterinary officer, Mr. W. G. McKay, have been appointed to Kenya Colony. Mr. G. Cowan has been appointed superintendent to the Gold Coast Agricultural Department ; Mr. H. Bruins-Lich, horticulturist, St. Helena ; Mr. H. P. Smart, agricultural officer, British Honduras; Mr. E. E. Martyn, botanist and mycologist, British Guiana. Six of these appointments are of scholars selected for two years training in Great Britain and at the Imperial College of Tropical Agriculture, Trinidad, under the Colonial Office Agricultural Scholarship Scheme, whose course finished last June. Amongst the transfers notified is that of Mr. C. W. J. Line from the Gambia to the Gold Coast Agricultural Department.

THE Committee on photochemistry of the National Research Council of the United States has recently issued its first report. This consists of a collection of six papers which appeared in the *Journal of Physical Chemistry*, April 1928, together with a short introduction by H. S. Taylor. The subject is considered from both the experimental and theoretical points of view, and the authors are : H. S. Taylor, W. D. Bancroft, G. S. Forbes, H. G. De Laszlo, S. C. Lind, and L. A. Turner.

WE have received a copy of Messrs. Oertling's new catalogue of British chemical balances and weights, in which a brief outline of the history of this wellknown firm from its foundation in London in 1849 to the present day is sketched. Precision instruments suitable for the finest work are now being made extensively in London by the firm, which claims to be employing only British capital and labour. Recent developments have necessitated the acquisition of a new factory, and the showrooms have been removed to 65 Holborn Viaduct, London, E.C.1, where the latest models may be inspected. The list includes balances suitable for use in schools and colleges, and also more elaborate instruments for research laboratories and factories. Special features are the precision torsion-balance, designed for the rapid weighing of very light objects up to 500 milligrams in weight with a sensitivity of 1 milligram, a micro-chemical balance with a concave cylindrical reflector for magnifying the fine divisions on the index, a flour-moisture tester and the 'chainomatic' balance, which has a capacity of 200 grams and a sensitivity of 0.1 milligram, although riders and fractional weights below 0.1 gram are not

CONJUNCTION OF URANUS AND A STAR.—On the night of Sept. 23, Uranus will make a very near approach to a small star of the sixth magnitude in the constellation Pisces. The two objects will appear in a telescope as a double star of faint and nearly equal magnitude. It will be interesting to find if they can be distinctly seen and separated by the unaided eye. An opera or field glass will show them well, and will exhibit their changes of position on succeeding nights due to the motion of the planet. The latter will pass the star on its southern side, its motion being from east-north-east to west-southwest.

The objects may be readily identified though they occupy a position in a decidedly barren region of the sky. If a line is drawn southwards from Sirrah to Algenib, the two bright stars forming the eastern side of the "Great Square of Pegasus," at about the same distance as that separating the two stars, the planet Uranus and the star 44 Piscium will be found a little to the south-east of the end of this line. The objects will be just visible to the naked eye on a dark moonless night, but whether they may be individually discerned is a little uncertain, as a good deal must depend upon the observer's vision and the state of the atmosphere. The gibbous moon will set on the night following Sept. 23 at midnight.

A RECENT LARGE SUNSPOT.—A large group of sunspots which showed considerable changes from day to day has recently been under observation. The group, which was of the stream type, did not develop in the usual manner, and on Sept. 11 several irregularly shaped spots composing the train became nearly linked up with the leader, thus almost completing one

required. The prices compare favourably with those of continental makes.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned :---A reader in physics in the University of Dacca (East Bengal, India)-The Registrar, University of Dacca, East Bengal (Sept. 30). A male senior lecturer in education at the Rhodes University College, Grahamstown -The Secretary, Office of the High Commissioner for the Union of South Africa, South Africa House, Trafalgar Square, W.C.2 (Sept. 30). An assistant lecturer in education at the University College of Swansea-The Registrar, University College, Swansea (Oct. 1). A lecturer in dental prothesis and orthodontics in the Dental School, Cairo-The Dean of the Faculty of Medicine, Kasr-el-Ainy, Cairo (Oct. 3). A physicist with electrical engineering experience, under the directorate of radiological research of the Research Department, Woolwich-The Chief Superintendent, Research Department, Woolwich, S.E.18. An advisory entomologist in the West Midland Province of Shropshire, Staffordshire, and Warwickshire, at the Harper Adams Agricultural College, Newport, Shropshire-The Principal, Harper Adams Agricultural College, Newport, Shropshire. A temporary architectural and civil engineering assistant at H.M. Dockyard, Rosyth-The Superintending Civil Engineer, H.M. Dockyard, Rosyth. A lecturer in zoology and botany at the Birmingham Central Technical College-The Principal, Central Technical College, Suffolk Street, Birmingham.

Our Astronomical Column.

big composite spot. As indicated by changes directly observable within some hours, the group was active spectroscopically. Mr. Newbegin, using a spectroscope of the Littrow type which he has added to his private observatory at Worthing, noted Doppler displacements of the *C*-line of hydrogen on Sept. 11, and later a bright reversal of this line was seen. A magnetic disturbance might reasonably have been expected about Sept. 13, but although the Greenwich magnetograph traces were somewhat disturbance was registered. This group of spots, together with another large one seen six weeks ago, continues the list of naked-eye spots given in NATURE of July 28 (p. 142).

| No. | Date on Disc. | Central Meridian Passage. | Latitude. | Maximum Area. |
|-----|--------------------------|------------------------------|------------|------------------|
| 6 | July 27-Aug. 6 | July 31.8 | 14° N. | 1/1000 |
| 7 | Sept. 6–18 | Sept. 12.7 | 14° N. | 1/1000 |
| Ar | eas are expressed as pro | oportion of sun's he | misphere c | overed. |

METEOR OF SEPT. 9.—Mr. W. F. Denning, 44 Egerton Road, Bristol, informs us that a bright meteor was observed by Mr. R. Kingman at Bristol on Sept. 9, at $8^{h} 35^{m}$ G.M.T. It passed almost vertically through Ophiuchus along a path of about 27° from 270° + 24° to 261° - 2°. The meteor was about as bright as Venus, and it gave a flash at the end which illuminated the southern sky. The motion was swift and the flight of the object seemed directed from a radiant at 290° + 52° in Cygnus, which is well known as supplying many meteors in August and September. A duplicate observation would be valuable and enable the radiant to be ascertained with certainty, as well as the height and velocity of the object.

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