

### Current Topics and Events.

THE first of the French experimental explosions took place, as arranged, on May 15 at 7.30 P.M. (summer time). Ten tons of melinite, contained in 64 barrels, were exploded simultaneously, forming a crater more than 60 feet wide and nearly 20 feet deep. Observers at a distance of 600 yards were inconvenienced by the air pressure in their ears. Of a number of animals that had been placed in pits not more than 50 yards from the source, a guinea-pig was killed, the rest were unhurt. The first results are said to be disappointing, but the success or failure of the experiment cannot be decided at so early a date. The explosion was heard at Bordeaux (152 miles) at 7.43-7.47. Taking the earlier time, the velocity of the sound-waves would be about 1029 ft. per sec., a value less than the normal velocity in air but somewhat greater than the maximum value (978 ft. per sec.) obtained for the Silvertown explosion of January 19, 1917. At the village of La Courtine, less than four miles away, only a slight shock was felt, but the vibrations are said to have been recorded at Montpellier (167 miles) and Strasbourg (329 miles). As the latter distance is more than a hundred miles in excess of the greatest distance at which the Oppau explosion was registered, some good estimates of the velocities of the condensational and distortional waves in the superficial layers should be obtained. The remaining explosions take place in the same district on May 23 at 8 P.M. and May 25 at 9 A.M. (summer time).

IN connexion with the exhibits relating to pure science arranged by the Royal Society for the British Empire Exhibition, a valuable handbook has been prepared and is obtainable at the Exhibition. The handbook is very much more than a catalogue of exhibits. It represents an attempt, made by those who in Great Britain are chiefly responsible for recent advances in science, to explain to the unscientific visitor the scope of the main investigations in physics and biology which are now in progress. To the lay reader it will be of extraordinary interest to read the declarations of master minds expressed in simple language: and to the scientific worker also the book will be of serious interest, first as a model of lucidity in describing abstruse subject-matter, and secondly as giving a summary conspectus of the state of science at the present time, of the kind which it is sometimes difficult to formulate in clear perspective amidst a mass of more detailed information. Descriptions and explanations of the actual exhibits will be found in the second part of the book, and here it will be well to note the periods during which individual exhibits and demonstrations will be on view, as not all will be available at any one time. Of more permanent interest, however, is the first part of the book, which consists of 21 essays on the principal current topics in physics, geophysics, botany and zoology, and physiology, preceded by an article on the genesis of the Royal Society reprinted from *NATURE* of February 9. One cannot help wondering whether even these lucid expositions can convey to the minds of unscientific adults a picture which corresponds in any serious

degree to the actualities of present-day knowledge: young students, however, whose imaginations have been aroused by scientific studies at school, will find here an earnest of the rich inheritance of thought and discovery which has been prepared for them by such men as the contributors. Perhaps the best way of describing this part of the handbook is to mention the names of the latter, which are as follows: Prof. Irvine Masson, Sir J. J. Thomson, Sir William Bragg, Sir Ernest Rutherford, Dr. F. W. Aston, Sir Frank Dyson, Prof. A. S. Eddington, Sir Richard Glazebrook, Prof. J. A. Fleming, Prof. A. Fowler, Prof. J. C. McLennan, Mr. J. E. Sears, Sir Napier Shaw, Dr. G. C. Simpson, Lieut.-Col. E. Gold, Dr. C. Chree, Dr. A. Smith Woodward, Prof. E. H. Starling, Prof. D. T. Harris, Profs. A. V. Hill and E. P. Cathcart, Prof. E. B. Poulton, and Dr. D. H. Scott.

AN expedition organised by the National Geographic Society of Washington will begin excavations at San Cuicuilco, a site south of Mexico city, early in June. The expedition is under the direction of Prof. Byron Cummings, who will be joined later by Mr. Nelson H. Darton of the U.S. Geological Survey. San Cuicuilco is situated in the lava-covered plain known as the Pedregal or Stony Place, which is some fifteen miles in length and about three miles wide. Preliminary investigations made by Prof. Cummings and Dr. Manuel Gamio, Director of Anthropology in the Bureau of Agriculture and Public Works in Mexico, have disclosed the existence of an artificial mound 412 feet in diameter and fifty-two feet high. The lava flow from the crater Xitli forming the Pedregal has here preserved the remains of a pre-Toltec people, but investigation has revealed the existence of another underlying stratum of lava in which are relics of a much earlier civilisation. Mr. Darton's work will be directed in particular to the lava flow and will aim at determining its age. For the earlier remains an exceedingly high antiquity is claimed, and it is anticipated that these investigations will go far to elucidate the question of the earliest development of culture, and of the history of man in America. It remains to be seen whether excavations will support the contention that this site contains remains dating back many thousands of years. It may be hoped, however, that they will provide valuable material towards determining problems of chronological succession on sites in Mexico and Central America, the lack of which is at present seriously felt in the prosecution of American archaeological studies.

MUCH alarm was caused a few years ago among those unversed in astronomy by the views of a certain "Prof." Porta, who predicted violent disturbances in the sun as a result of certain planetary conjunctions. The daily press unwisely gave wide publicity to these announcements, and only consulted astronomers when the mischief had been done. Another mischief-maker is now at work in the person of Mr. W. Gornold; an article by him is referred to in the *Christian Herald* of May 8. Being led by his interpretation of some of the

cycles in Daniel to expect cosmic convulsions in the year 1926, he then looks round to see what planetary configurations can be worked in with this idea. He finds a conjunction of Mars and Jupiter, with Neptune distant  $180^\circ$  from them, and Saturn  $90^\circ$ . This is in the regular astrological manner; but he seems not to have troubled to estimate the actual tidal influence of the planets. Since Jupiter is never nearer to us than 4 units, its tidal influence is  $1/(4^3 \times 1000) = 1/64000$  of that of the sun; that of Neptune is, say,  $1/4000$  of Jupiter; further, when bodies are  $90^\circ$  apart their tidal effects tend to neutralise each other. Such are the insignificant forces which Mr. Gornold uses to build up a prediction of stupendous convulsions. There is even less reason in this prediction than in that of Mr. Porta; it will be remembered that the sun was quite undisturbed at the date when he predicted gigantic sun-spots.

THE report of the Council of the Iron and Steel Institute on the proceedings and work of the Institute during 1923 was submitted at the fifty-fifth annual general meeting held on May 8. From this it appears that there are 2001 ordinary members, 81 life members, and 47 associates. Special reference is made to the death of the immediate past president, Dr. J. E. Stead, on October 31. The income for the year under review was 8095*l.* exclusive of the Carnegie scholarship funds and of the interest received from the investments constituting the Special Purposes Fund, while the expenditure was 8012*l.* Two general meetings were held during the year, the annual one as usual in London on May 10 and 11, the other in the autumn in Milan, by the kind invitation of the Italian Association of Metallurgical Industries. At the conclusion of the meeting members were entertained with generous hospitality in Milan itself, and afterwards visited Florence, Rome, Leghorn, Piombino, Pisa, Genoa, Savona, and Turin. At Rome the members were received by the Prime Minister. Thirty-eight papers were contributed to the proceedings of the Institute during the year, and have been reprinted, together with the discussions and correspondence thereon, in the *Journal*. The Bessemer Gold Medal was awarded to the late Dr. W. H. Maw. Various grants were made by the Council on the recommendations of the Carnegie Scholarship Committee for the purpose of assisting researches in iron and steel.

THE remarkable pallor of white men living in the tropics is well known, and has given rise to the belief that white races show a tendency to develop anæmia to a marked degree after some months of residence in tropical climates. According to Dr. C. Eijkman, of Utrecht, who dealt with the subject in a lecture on May 2 (*Lancet*, May 3), researches carried out when he was principal of the medical laboratories at Weltevreden (Dutch East Indies) show that in all probability this belief is without any foundation in fact. The red blood cells and the hæmoglobin content, the specific gravity, the water content and the osmotic pressure of the blood of white sojourners, white new arrivals and natives, are all identical, within the usual limits of personal variation; the regeneration of blood after

hæmorrhage also occurs as quickly and completely in the tropical dweller of white race as in other normal men. In all probability the pallid skin is to be accounted for by the direct effect of constant warmth; in temperate zones it is only the exposed parts of the skin that exhibit freshness of colour, and this is frequently lacking even in that climate when the individual is much confined indoors. Dr. Eijkman was able to discover only one definite point of difference in the heat-regulating mechanism between whites and blacks, namely, that the water exchanges, by kidneys and skin, are more active in the whites. We agree with him that the problem of acclimatisation of the white man is not yet solved.

WE have received from Prof. Osborn of New York a pamphlet setting forth the constitution of the International Commission on Eugenics. This constitution was adopted at the International Congress of Eugenics held in New York in September 1920. Eugenics is both a science and an art. As a science it occupies itself with all the ascertainable facts about the laws of heredity in the human races; as an art its purpose is to devise methods of regulating reproduction so as to improve the human species. The importance of eugenics has impressed itself on the public mind both in Europe and America in very marked degree since the War, and some even consider that one of the main underlying contributory causes of the War was race-pressure, which it is the object of eugenics to avoid. With the object of spreading eugenic principles and of enabling eugenicists from different countries to compare notes, it has been the custom to hold international congresses at intervals of five years. The last of these was that in New York already referred to. Major Leonard Darwin, president of the parent society (the Eugenics Education Society of London), attended as representative of Great Britain and was at once elected president of the Congress. It was felt to be necessary to institute some body to make continuity between one congress and the next and to represent international eugenics when no congress was sitting, and for this purpose the International Commission was set up. Its purpose is to call together the quinquennial congresses and to organise eugenic propaganda in all countries, and it consists of four permanent officers and not more than three representatives from each co-operating country. At present there are twenty-three representatives from fifteen countries. The president is Major Darwin; the vice-president, Prof. Osborn, and the secretary and treasurer, Dr. Govaerts of Belgium; Mrs. Hodson, secretary of the Eugenics Education Society, is assistant secretary. Thus by the establishment of this Commission a permanent framework for eugenic organisation has been provided, and we have no doubt that it will prove of the utmost value to eugenic propaganda all over the world.

At a meeting of the New York Academy of Sciences on April 14, Dr. William K. Gregory described three jaws of the Miocene ape, *Dryopithecus*, recently discovered by Dr. Barnum Brown in the Siwalik Hills of northern India. According to the report in *Science*, each of the jaws lacks some teeth, but is sufficiently

well-preserved to show that "Dryopithecus is a fore-runner of man as well as the apes." The three specimens are said to have been found in three successive horizons, and represent three different stages in the evolution of the ape. They are particularly important, because the only remains of great apes previously known from the Siwalik formation are one portion of upper jaw in the British Museum and some teeth and fragments in the Indian Museum. Dryopithecus itself has hitherto been found only in the Miocene of Europe, and is not represented by skeletons (as the American report states) but merely by imperfect lower jaws and teeth. One of these jaws from Lérida in Spain, which was described by Dr. Smith Woodward in 1914, displays well the front end or symphysis. In the latter feature it "resembles the large modern Anthropoids no more closely than it agrees with the earliest known true man. By slight changes in two different directions it may have passed into the one as readily as into the other." The conclusions to be drawn from the known Indian and European fossils are thus the same.

IN reply to a question in the House of Commons on May 15 relating to conditions at the Museum of Practical Geology, and asking whether the advisability of moving the collection to South Kensington, and selling the valuable site in Piccadilly, had been considered, Mr. Trevelyan, president of the Board of Education, stated that the questions involved in the development of the Museums at South Kensington were all necessarily postponed during the War. Steps are now being taken to put the existing Geological Museum into constructional and decorative repair, but the Board of Education and the Committee of the Privy Council for Scientific and Industrial Research intend in due course to reconsider the Bell Committee's report, which proposed to house the Geological Museum on a site contiguous to the collections of the Natural History and Science Museums.

SIR WILLIAM J. POPE, professor of chemistry in the University of Cambridge, has been elected a corresponding member of the Academy of Sciences of the Institut de France.

THE annual visitation of the Royal Observatory, Greenwich, will be held on Saturday, June 7, when the Observatory will be open for inspection at 3.30 P.M.

THE annual visitation of the National Physical Laboratory, Teddington, will be held on June 24, when the chairman and general board of the Laboratory will receive the guests.

THE Right Hon. Winston Churchill will deliver the Oration in the Great Hall on Oration Day, Friday, June 27, at the London School of Economics and Political Science.

THE annual general meeting of the Institute of Physics will be held on Monday, May 26, at 4.30 P.M., in the rooms of the Royal Society, Burlington House, when Sir Charles Parsons will deliver his presidential address.

AT a meeting of the Anthropological Society of Washington on April 15, the following officers were

re-elected: *President*, Truman Michelson; *Vice-President*, J. P. Herrington; *Secretary*, Rev. John Cooper; *Treasurer*, J. N. B. Hewitt; *Members of the Council*, N. M. Judd, Felix Neuman, and C. F. Anderson.

THE Society of Engineers is convening two conferences of the members and their friends (including ladies) of the institutions associated with it, to be held at the British Empire Exhibition on Friday, June 6, and Monday, September 15. From 10.30 A.M. to 1 P.M. short papers on engineering subjects will be read and discussed. Application for tickets should be made at once to the Secretary of the Society of Engineers, 17 Victoria Street, Westminster, S.W.1.

AT the meeting of the Royal Society on May 15, the name of Mr. Henry Balfour, curator of the Pitt Rivers Museum, Oxford, was added to the list of elections into the Society, the list of selected names having been reduced to fourteen by the death of Dr. T. Nelson Annandale.

WE are asked to announce that there may be some delay in the appointment of a director of the National Poultry Institute at Harper Adams Agricultural College, as the governors have decided to invite applications from Canada and the United States. It is unlikely, therefore, that any appointment can be made before the middle of June.

ON the occasion of the celebrations in connexion with the centenary of the birth of Lord Kelvin which will be held at the University of Glasgow on Commemoration Day, June 25, Dr. Alexander Russell, president of the Institution of Electrical Engineers, will give the Memorial Oration. Lord Kelvin was three times president of the Institution of Electrical Engineers, and Dr. Russell is an old pupil of his.

AT the annual general meeting of the Manchester Literary and Philosophical Society held on April 29, the following officers and members of council were elected: *President*, Prof. H. B. Dixon; *Vice-Presidents*, Mr. T. A. Coward, Mr. Francis Jones, Prof. T. H. Pear, Prof. F. E. Weiss; *Secretaries*, Mr. John Allan, Prof. S. Chapman; *Treasurer*, Mr. R. H. Clayton; *Librarians*, Mr. C. L. Barnes, Dr. W. Robinson; *Curator*, Mr. W. W. Haldane Gee; *Other Members of the Council*, Prof. W. L. Bragg, Rev. A. L. Cortie, Dr. A. W. Crossley, Mr. W. E. Kay, Prof. Arthur Lapworth, Prof. F. L. Pyman, Mr. C. E. Stromeyer, Mr. R. L. Taylor, Mr. W. Henry Todd; *Ex-Officio*, the chairman and the secretary of the Chemical Section.

BRITISH exporters of plant nursery stock, and the plant pathologists to whom falls the duty of inspecting this stock before exportation, will both take a lively interest in the report of a committee on crown-gall inspection which was adopted by the American Phytopathological Society on December 31, 1923. This report, which is published in *Phytopathology*, vol. 14, No. 3, March 1924, requests that distinction should be made between crown-gall and excessive callus formation. It also finds that in general "the injurious effects of crown-gall have been over-estimated, particularly in the case of the apple," states

that "hair-splitting methods of inspection are unnecessary," and that "except as a penalty for law violation, the rejection of an entire shipment because some plants in it are affected by crown-gall is unwarranted."

THE Ministry of Agriculture and Fisheries has awarded the following travelling research fellowships to research workers in agricultural science: (1) 25*o*l. to Mr. F. L. Engledow, of the Cambridge University Plant Breeding Institute, for a visit to the United States to investigate American work on barley genetics, cereal yield testing, and the quality, storage, and production of wheat; (2) 50*l*. to Mr. E. S. Salmon, of the South-Eastern Agricultural College, Wye, Kent, for a visit to Czechoslovakia to investigate the growing of hops in that country; (3) 60*l*. to Dr. A. G. Ruston, of the University of Leeds, for a visit to Switzerland and Denmark for the purpose of investigations into agricultural costings. In addition to these fellowships, the Ministry has awarded grants to workers in agricultural science to enable them to represent Great Britain at international conferences and congresses. This is a new and welcome development. Grants for the present financial year, amounting to 175*l*., have already been awarded to Sir John Russell, Prof. R. C. Punnett, Dr. B. A. Keen, Mr. G. W. Robinson, and Dr. N. M. Comber.

RESEARCH and education will benefit by the surplus of just over 780*l*. which the local committee organising the Liverpool meeting of the British Association has realised from receipts for excursions, subscriptions, etc. Subject to the approval of subscribers, the money will be allotted as follows: 300*l*. to the Tidal Institute of the University of Liverpool towards the fund which is being collected for the purchase of a tide-predicting machine; the profits from the exhibition of scientific apparatus, with an additional sum to make 200*l*., to the Technical and Commercial Education Sub-Committee of Liverpool for the endowment of a prize called the British Association Exhibition, to be awarded annually in the Central Technical School; and the balance to a fund to assist scientific workers from Liverpool to attend meetings of the British Association in the British Isles.

A PRELIMINARY programme has been issued of the thirty-fifth congress of the Royal Sanitary Institute to be held at Liverpool on July 14-19 under the presidency of the Marquess of Salisbury. The congress will meet in the following sections, the names of the sectional presidents being in brackets: sanitary science (Sir William Leishman); engineering and architecture (Mr. J. A. Brodie); maternity and child welfare, including school hygiene (Dr. E. W. Hope); personal and domestic hygiene (the Lady Mayoress of Liverpool); industrial hygiene (Dr. T. M. Legge). There will also be a number of conferences of sanitary authorities, veterinary inspectors, health visitors, etc. Prof. H. R. Kenwood, Chadwick professor of hygiene and public health in the University of London, will deliver a popular lecture on July 16 on "Modern Civilisation from the Health Standpoint," and an exhibition of apparatus and appliances relating to

public health and domestic use will be open throughout the congress. The local secretaries for the meeting are Mr. Walter Moon and Dr. A. A. Mussen, and the local offices, Municipal Buildings, Dale Street, Liverpool.

A MEETING of the Biochemical Society was held in the Department of Physiology of the University of Manchester on May 10. This, the first meeting of the Society in Manchester, was well attended by members from various localities and proved thoroughly successful. There were eleven communications embracing a wide range of subjects from organic chemistry on one hand to biology on the other. The communication of greatest general interest was that of Prof. J. C. Drummond and Miss K. H. Coward, "Studies on the Chemical Nature of Vitamin A." This vitamin has not yet been isolated and evidently is present only in the smallest traces even in cod-liver oil, where it is most abundant; but the evidence brought forward by these workers demonstrates that it must be a definite and stable chemical individual. It can be distilled *in vacuo* without loss of activity at a high temperature, and comes over as a definite fraction along with the complex alcohols with which it is associated. Another communication of general interest was that of Prof. R. Robinson, "Note on the Constitution of Evodiamine," showing that to elucidate the chemical constitution of certain alkaloids, biological arguments are of considerable help.

THE April number of *Scientia* contains an article by Prof. D. Fraser Harris, of the University of Halifax, N.S., entitled "A Defence of Philosophic Neo-Vitalism." The article appears to have been written some few years ago, and in several particulars it is not brought up-to-date. It is a vigorous statement of the case against materialism, but it is rather like flogging a dead horse. We are all now convinced that if the great nineteenth-century biologists were still with us, they would not be upholding the materialism which appeared to them then to offer the only possible working hypothesis. What, after all, was Huxley's "Epiphenomenon theory" but a tentative effort, brilliant in its conception, to rationalise a contradictory and peculiarly disconcerting phenomenon? It is not philosophy, but the progress of science and particularly the new theory of matter, which has discredited materialistic biology. What we are waiting for is a clear and consistent philosophy of the organism. The neo-vitalist has an easy task in exposing the weakness of the old mechanism, but the least he can do is to make clear what his own theory is, if he has one, of the relation of structure to function and of the nature of the noumenal reality behind phenomena.

THE "little Becker balance on the bench" was immortalised many years ago by a chemist-poet who sang of "The Indestructibility of Matter" in the strain of Kipling's "Absent-minded Beggar"; and time has in no way detracted from its renown. The makers, Messrs. F. E. Becker and Co. (W. and J. George (London) Ltd., Proprietors), "Nivoc" House, 17-29 Hatton Wall, London, E.C.1, have recently issued a new catalogue of balances and weights which will doubtless force itself on the attention of those

who live or learn by having to "put the weights on the balance-pan and weigh, weigh, weigh." Scientific workers may, indeed, be grateful that their really good balances outlive them by many years (we wonder which balance holds the time-record for continuous service!), but the makers can also be thankful that the ever-increasing development of scientific instruction in our schools and colleges ensures a perennial demand for their wares. They may even smile when they reflect that although these balances are used to illustrate the great law of indestructibility, their ephemeral "up and down" existence at the hands of schoolboys affords some welcome evidence to the contrary. Some of the illustrations in the catalogue are very well executed in natural colours; and the prices quoted compare very favourably with those demanded a few years ago. Thus the "little Becker balance," well known to nearly every schoolboy, is now obtainable at a price less than 50 per cent. above the pre-War price and 30 per cent. below the price asked in 1918; and the prices of the more costly balances appear to have fallen to a similar extent.

UNDER the title "Iter Turcico-Persicum," Dr. Fr. Nábělek is publishing the results of his botanical explorations, during 1909-1910, in the countries of Palestine, Mesopotamia, Kurdistan, and Armenia. Part I., *Plantarum Collectarum Enumeratio* (Ranunculaceæ-Dipsacaceæ), appears in the Publications de la Faculté des Sciences, de l'Université Masaryk, 1923.

MESSRS. SIDGWICK AND JACKSON, LTD., announce the publication in July next of "A Human Geography of Cambridgeshire," by J. Jones, the aim of which is to encourage the closer geographical study of the home area. It will endeavour to show how this may be done, by presenting the human geography of an English county, as deduced from an examination of maps and Government returns.

MR. JAMES THIN, South Bridge, Edinburgh, has just circulated Catalogue No. 200 of upwards of 5000 books of science offered for sale by him in new or second-hand condition. Practically all branches of science are represented. There is also a section devoted to scientific journals and proceedings of learned societies. The list may be had free upon application to the publisher.

MESSRS. W. HEFFER AND SONS, LTD., Petty Cury, Cambridge, have just started an interesting and useful serial publication entitled *The Recorder*, being a list of "remainders" on sale by them in new condition, at greatly reduced prices. It is, we understand, the intention of the publishers to issue the list some six times a year, and it will be sent post free upon request. Among the books offered for sale in No. 1 are "The Life of Alfred Newton" (the ornithologist), by B. F. R. Wollaston; "Wild Creatures of Garden and Hedgerow," by Frances Pitt; and "The Natives of the Loyalty Group," by E. Hadfield.

### Our Astronomical Column.

THE TRANSIT OF MERCURY ON MAY 8.—Fine weather favoured the observation of this phenomenon at Greenwich, Ipswich, and several other stations. Egress took place  $1\frac{1}{4}$  hours after sunrise; owing to the low altitude the limbs were somewhat tremulous, which made it difficult to time the contacts with accuracy, but they were concluded to have taken place some seconds earlier than the predicted times, which were, for Greenwich,  $5^h 36^m 13^s$  A.M. for internal contact, and  $5^h 39^m 12^s$  for external contact. Mr. E. H. Collinson, at Ipswich, made them  $5^h 36^m 5^s$  and  $5^h 38^m 30^s$ . He noticed a "black drop" before internal contact, and also saw a somewhat lighter ring surrounding the planet when wholly on the sun's disc. This effect has been noted before, and is probably optical.

May transits usually occur at intervals of 13 and 33 years alternately, but on the present occasion there are two consecutive 33-year intervals, the dates being 1891, 1924, 1957. Several books state erroneously that there will be a transit in May 1937. There will, however, be an extremely near approach, and the planet may not improbably be seen with a spectroscope projected on the chromosphere.

DENSITY OF DWARF STARS.—Prof. Eddington's paper, in *Mon. Not. Roy. Ast. Soc.* for March, on stellar masses contains a suggestion as to a possible means of verifying the great density of certain dwarf stars which was indicated by his research. The companion of Sirius is of type F, and is of about the solar mass; if its surface brightness is really that associated with type F, its density must be very high and its diameter small. Calculation indicates that on these assumptions the Einstein spectral shift at its surface would correspond to a speed of some 20 km./sec. This is

an amount that should be quite easy to detect were it not for the disturbing effect of the very brilliant primary; it must be practically impossible to obtain a spectrum of the faint star without some diffused light of the bright one. The Mt. Wilson observers are attempting this research, and their conclusions will be awaited with interest.

STAR DISTRIBUTION.—The *Scientific Monthly* for May contains an article by Prof. Harlow Shapley, in which he discusses the bearing of recent researches on our view of the stellar system. He considers that this contains numerous subsidiary systems, one being the Cygnus star-cloud, on the edge of which he supposes the sun to be; the dark patches in Taurus, Ophiuchus, and Sagittarius are ascribed to nebulous clouds a few hundred parsecs from us. He goes on to determine the numbers of stars of different types in a million cubic parsecs; they are given as Giant M 22, Giant K 160, B  $4\frac{1}{2}$ , A 250, Dwarf F 680, Dwarf G 7600. The Dwarf K, M stars are presumed to be much more numerous than Dwarf G, but they are mostly too faint to come into our catalogues. The very small number of B stars indicates that only those of very exceptional mass can attain this type.

A diagram is given of the degree of galactic concentration for different types. This is practically zero for types F and G, showing that the stars considered are mostly dwarfs at a moderate distance; it is very pronounced for types B and A, and evident, though to a less extent, for K and M. It is welcome news that the Henry Draper Catalogue of Spectra is now being extended to much fainter stars in the galactic region. Thus in a field in Aquila, Miss Cannon has recorded 1567 spectra, of which less than 200 were previously classified.